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Contents	Page
Jeff Lunn YNU President for 2023-2024	161
Status and conservation of the Bog Bush-cricket <i>Metrioptera brachyptera</i> in Yorkshire* Africa Gómez	164
The veteran trees of Jacob Smith Park, Scriven, North Yorkshire Andy Millard	173
Yorkshire Plant Gall Recorder's report for 2022 Sam J. Buckton	179
The floristic recognition of Upper Teesdale: the key manuscript Frank Horsman	183
Some notes on the former abundance and recent declines of a selection of bird species in the valleys of the Rivers Nidd and Lower Ure John R. Mather	189
Further back in time: new discoveries of a specimen of <i>Procerites</i> sp. and an unusual example of the Lower Bathonian ammonite <i>Parkinsonia (Gonolkites) convergens</i> (S. Buckman, 1925) at Huntsman Quarry, Naunton, Gloucestershire* Kenneth J. Phipps	201
A survey of Water Voles in upland habitat of the Holme Valley, West Yorkshire Natasha Houghton	209
Errata	216
YNU Excursion Reports 2023	
Hell Wath LNR Ripon (VC64)	216
Nutwith Common Woods (VC65)	220
Hornsea Mere (VC61)	224
Forest of Flowers, Huby (VC62)	227
Potteric Carr YWT Nature Reserve (VC63)	231
Book Review: <i>Flowers and Ferns around Huddersfield</i> by M. Jill Lucas, 2023	234
John Newbould BEM	236
Joint YNU and CIEEM Conference	237
Mass stranding of Spem Whales <i>Physeter macrocephalus</i> on the Holderness coast, 24 December 2020 Colin Howes and Africa Gómez	238
YNU Calender 2024	240

An asterisk * indicates a peer-reviewed paper

Front cover: Alder Tongue galls *Taphrina alni* seen in the VC6 Excursion. (Photo: Ken White)

Back cover: YNU members at the VC63 Excursion to Potteric Carr. The site manager, Jim Horsfall, is 2nd from the right. (Photo: Joyce Simmons)

The Naturalist

Jeff Lunn BEM BSc MPhil CEnv MCIEEM: YNU President for 2023-2024



It's a real pleasure and privilege to have been appointed President of the YNU. I joined in 1974 and so this honour marks my half-century as a member!

I was born and brought up in Barnsley, where I still live, and my life as a naturalist and conservationist has followed two separate paths, often interlinking and cross-fertilising. Both have been nurtured by my innate love of natural history. One path follows my voluntary and spare time work and the other my professional working life.

As a boy I kept fish and amphibians in the back-yard of our terraced house in the middle of town, and sat by the coal-fire reading the classic Observers' books on nature, dreaming of one day seeing some of the exotic animals pictured. A chance encounter introduced me to David Standring, a pioneering member of a group of Barnsley ornithologists, who took me under his wing and taught me so much about the birds and habitats of the town and its surrounds.

It remains today a great place to live, with the moorlands of the Peak District and the wetlands of the Dearne Valley within easy reach, and plenty of rolling countryside and post-industrial habitats in between. We were joined by my other boyhood mentor, Philip Wordsworth, who fortunately and unusually had a car (actually a dormobile) and we then ventured regularly to Spurn, Filey, Flamborough, or even further afield to Northumberland, the Solway and Suffolk in search of birds.

After graduation, I started my environmental career with the Yorkshire Water Authority as a Pollution Inspector in Sheffield. Following a spell working for the 'Zoological Record' in York, I joined the RSPB as the first warden of South Stack, Anglesey and then at the Loch of Kinnordy, Angus. This was followed by research contracts surveying the birds and habitats of the rivers

Severn and Vyrnwy in Wales. I then undertook the first ever reedbed survey of Britain, working out of a tent as a peripatetic ecologist for a year, and subsequently lived in Norfolk to document the extensive reedbeds of East Anglia.

It was whilst working at South Stack that I met Dr Stephen Ward of the Nature Conservancy Council (NCC), a national expert on limestone pavements based in Bangor. He opened my eyes to much more of the detail and depth of the ecology of the coastal heaths as well as introducing me to the concept of Sites of Special Scientific Interest (SSSIs) and the work needed to ensure the designation and management of the best sites for nature in the country. I thought that this was the job for me!

It was in 1985 that I landed the post of Assistant Regional Officer (ARO, or county officer) for Perthshire in Scotland for the NCC. This was followed by postings in Greater Manchester and Merseyside before returning to work in various roles up to Area Manager in Yorkshire for the next 25 years. My career with the NCC (then English Nature, now Natural England) has been a thrilling, exciting and fulfilling whirlwind of a journey, coinciding with the blossoming of the environmental movement in the UK. I have been particularly fortunate to lead teams of dedicated and passionate staff wanting to do the best for nature in Yorkshire. It is they who deserve much more credit than is given for at least preventing a lot more damage to this county's wildlife than would have occurred otherwise.

I was fortunate to start up, or be involved with, many initiatives which have secured better nature conservation outcomes in Yorkshire. Fundamentally, this has been to try and stem the loss of wildlife through designating and protecting sites as SSSIs. Thereafter Yorkshire's Special Protection Areas (SPA) and Special Areas of Conservation (SAC) series were established, which include those moorlands, particularly important for birds, as well as many of the other iconic places for wildlife in the county such as the Humber Estuary, Flamborough Head, the Lower Derwent Valley, Thorne & Hatfield Moors and Ingleborough.

It is rather easy to overlook the importance of the designation process, especially as the headline for the last decades has been the depressing fact that most SSSIs are in 'unfavourable condition'. However the process of identifying landowners and interested parties, talking with them to explain the importance of the wildlife on their land and working with them to achieve its protection, has always been a long slog, often acrimonious and hostile, but also very rewarding when successful.

Huge benefits during my time in the county were the creation of the Heritage Lottery Fund, other funding streams such as the Landfill Tax scheme and, of course, European funding, all of which all could be used for environmental work. Coupled with small amounts of 'seed-funding', it was possible to build projects to deliver real wildlife gains, though it should never be underestimated how bureaucratic, tortuous and hard graft the process to success could be. I am really proud of the help that we gave to many organisations and to have made many lasting friendships along the way.

One of my most satisfying professional involvements was the restoration of Thorne & Hatfield Moors, which would not have happened without the dogged persistence, intelligence and guile of the Thorne & Hatfield Conservation Forum. I was given the job of leading the NE team to re-wet and manage huge swathes of the moors following the £17 million buy-out of the peatlands by the government. Another major project was the creation of new intertidal habitat on the Humber, with (at the time) the largest managed retreat project in the country at Alkborough Flats, on the opposite shore of the River Trent from Blacktoft Sands. This has also proved to be

hugely successful and was built on the basis of benefits to flood defence, wildlife and people.

In the mid-1990s, the sale of one of Barnsley's most treasured wildlife sites, Broomhill Flash in the Dearne valley, brought the threat of potential developments. Unfortunately, the time wasn't right for the large conservation bodies to step in and so, with huge amounts of help, advice and support from many friends, colleagues and advisors, I set up the Garganey Trust in 1999 and we purchased the site in 2003. Further acquisitions followed, including the purchase of the adjacent 13-acre arable field which we converted into a splendid hay meadow. It was named Clegg's Meadow after the famous Yorkshire naturalist, broadcaster and original Barnsley birder, who loved the place. The wildlife has responded magnificently. 2023 has seen, amongst many other things, nesting Black-necked grebes, Pochard, Shoveler, Snipe, Lapwing and with Eels and Ten-spined Sticklebacks in the lake, and Cowslips carpeting the meadow. The greatest accolade I could have not imagined was the designation of Broomhill Flash as part of the Dearne Valley Wetlands SSSI (i.e. nationally important) in 2022.

It has been an education to witness the blossoming of ecology and the environment in the last 50 years, and public attitudes change. Aware of the difficulty of getting ecology and the environment recognised in decision making and raising the profile and standing of ecologists in bodies such as local authorities, consultancies and government departments, I was involved as a founding member of the professional body the Chartered Institute for Ecology and Environmental Management (CIEEM). I am still a member and have achieved the awards of Chartered Ecologist and Chartered Environmentalist.

As a young man, submitting my records to the YNU annual bird report introduced me to the discipline of records, note-taking, descriptions and evidence and it has always been a thrill to have records accepted and articles published in regional journals such as *The Naturalist* and the *Sorby Record*, and national ones such as *British Birds* and *British Wildlife*. This has led me to a particular interest in Local Records Centres (LRC). Working closely with West Yorkshire Ecology, I was part of the Editorial Board which published the *West Yorkshire Plant Atlas*, and worked alongside YNU legends Dr W Sledge and late colleagues Margaret Hartley, Phyl Abbott and Geoffrey Wilmore. Dr Sledge informed us he had known Frederick A. Lees who, in turn, had published the original *Flora of West Yorkshire* in 1888, thus providing a living link to one of the towering figures of Yorkshire botany.

Later, in North and East Yorkshire, it proved difficult to persuade the council administrations to house their own record centres and so I helped set up a charity to establish a trust (the Yorkshire and Humberside Ecological Data Trust) to operate the North & East Yorkshire Ecological Data Centre (NEYEDC). I acted as Treasurer and Secretary for many years, taking on the Chairman's role in 2021. Today the NEYEDC is a small but slick, professional outfit managing ecological data and providing data expertise and technological input to a wide range of users such as consultancies and local authorities. As importantly, it has forged close links with the YNU through the sterling efforts of members such as John Newbould and Andy Millard, to archive records, house the Union's library, and provide membership administrative support.

Perhaps the best example of my two paths crossing has been the project to publish the *South Yorkshire Plant Atlas*. I was honoured to work with Geoffrey Wilmore and Professor John Rodwell as co-editors of this volume, as well as contributing records to the publication, together with many dedicated and energetic botanists.

I was awarded the British Empire Medal in the Queen's 2020 Birthday Honours list, for 'Services to Nature Conservation in Yorkshire'. I was really thrilled and honoured to receive the award,

and grateful to those who thought me worthy of nomination. Natural history and nature conservation still form a fundamental part of my life, and my curiosity and wonder remain undiminished. I've worked with some brilliant people and in some of the most spectacular places in the county and country following my passion for nature, and I hope to continue to do so. I hope that the Presidency of the YNU will help me to carry on working effectively for nature, especially in the face of the massive challenges that it still faces.

Status and conservation of the Bog Bush-cricket *Metrioptera brachyptera* in Yorkshire

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In 2004, Martin Limbert produced an annotated check-list of bush-crickets in Yorkshire, which regarded all the recorded species as rare, localised, extinct or extremely rare (Limbert, 2004). It seems astonishing that bush-crickets, as other insect groups benefiting from climate warming, have undergone striking northwards range expansions in the UK in recent decades (Sutton *et al.*, 2017). These changes have directly affected the Yorkshire fauna. For example, the Roesel's Bush-cricket, *Roeseliana* (= *Metrioptera*) *roeselii*, and the Short-winged Conehead, *Conocephalus dorsalis*, have expanded across Yorkshire to varied extents. In addition, two new species have been added to the bush-cricket Yorkshire list, which are now becoming widespread and abundant: the Long-winged Conehead, *Conocephalus fuscus*, with the first record at Thorne Moors/Hatfield area in 2012, and the Southern Oak Bush-cricket, *Meconema meridionale*, with the first Yorkshire record in Hull in 2011 (Gómez, 2023). Phillip Whelpdale (Whelpdale, 2019) illustrated the dramatic northwards range expansion across Yorkshire of Long-winged Coneheads and Roesel's Bush-crickets in a period of a few years. The increased diversity and recent range expansions in the bush-cricket fauna of Yorkshire, however, hide the fact that not all species might be faring equally well.

The Bog Bush-cricket, *Metrioptera brachyptera*, is one of the longest-known species of bush-cricket in Yorkshire, with a history spanning nearly two centuries. It was first reported, together with the Short-winged Conehead, from Thorne Moors in 1837 (Limbert, 1998). It is a medium sized insect, either brown and green or entirely brown, but always with a green underside. It has a distinctive white margin to the rear of the pronotum, which helps distinguish it from the Roesel's Bush-cricket, where the whole pronotal margin is pale (Figure 1, p165). Bog Bush-crickets are brachypterous, and hence flightless, and are assumed to have poor dispersal ability. Although fully winged forms have been described, they are extremely rare and unknown from Yorkshire (Limbert, 1998). In addition, the species has narrow habitat requirements, associated with lowland raised bogs and wet heaths in areas with Purple Moor-grass, *Molinia caerulea*, and Cross-leaved Heath, *Erica tetralix* (Evans & Edmondson, 2007), both nationally rare habitats (Internet reference 1). Males call with a continuous stridulation peaking at 25 kHz that has been compared to a train carrying load or to a rapidly ticking clock, usually from the densest available vegetation. The eggs are laid in Purple Moor-grass and the seeds of this grass and heaths are a food source for this species (Benton, 2012). The nymphs rely on fresh tender growth and are bound to moist areas, whilst as the temperatures cool later in the season, the

adults are attracted to warmer microhabitats (Limbert, 1987). Although a widely distributed Palaearctic species not regarded as of global conservation concern (Hochkirch *et al.*, 2016), the Bog Bush-cricket is a UK Nationally Scarce species (Sutton *et al.*, 2017). Limbert (1998) reviewed the historical and modern records of the species in Yorkshire, and concluded that it was a rare and localised resident species, a status that remained unchanged in his 2004 assessment (Limbert, 2004). Recent field experiments suggest that Roesel's Bush-cricket is competitively superior, and might displace Bog Bush-crickets where their ranges meet (Berggren & Low, 2004). With the current expansion of Roesel's across Yorkshire, the Bog Bush-cricket might become more restricted in its distribution. In addition, as a habitat specialist, the species might be more vulnerable to the effects of climate warming (Pearce-Higgins *et al.*, 2017). Finally, once a population becomes locally extinct, natural recolonisation, given the flightless nature of the species, is unlikely (Baldock, 1999). Overall, the species appears to have declined in range in the UK in recent decades (Beckmann *et al.*, 2015). Therefore, a regional assessment of the species' current distribution towards its better protection is warranted.

In this article I review and summarise the current status of the Bog Bush-cricket and modern records and sites in the 25 years since Limbert's review (Limbert, 1998, 2004). I also discuss future potential monitoring and conservation actions.



Figure 1. Bog Bush-cricket.
Adult male from Thorne Moors.
Photo: Barry Warrington

Methods

I searched electronically for all Bog Bush-cricket records held at the NBN Gateway (downloaded 18 August 2023). An additional search at iRecord for recent records showed that only four occupied grid squares were obtained from cited publications. Barry Warrington supplied 12 records from Thorne Moors which were submitted to iRecord. After downloading the records I cleaned the database by removing duplicates and standardised site names to simplify the parsing of locations for this species.

Results

There are just eleven areas where the Bog Bush-cricket has been recorded in Yorkshire in almost two centuries of recording (Figure 2), of which at least six were known in 1998 (Limbert, 1998). Since 2000, the Bog Bush-cricket has been recorded in eight areas, with three new sites for the species (Cropton Forest, Newtondale and Tranmire Bog). Overall, the NBN Atlas held a total of 55 Bush-cricket records (see Table 1 for a breakdown per site/area). It must be noted that results of past surveying campaigns were not necessarily passed to NBN gateway, or organisations that feed into it, so only a range of years and grid locations are available. The results presented here have limitations, as they are based on a combination of past surveys and ad-hoc records, so they can only provide a qualitative guidance as to the continuing occurrence of Bog Bush-crickets in the areas reported. More weight should be given to presences than to absences. A summary of the knowledge of each of the populations follows.

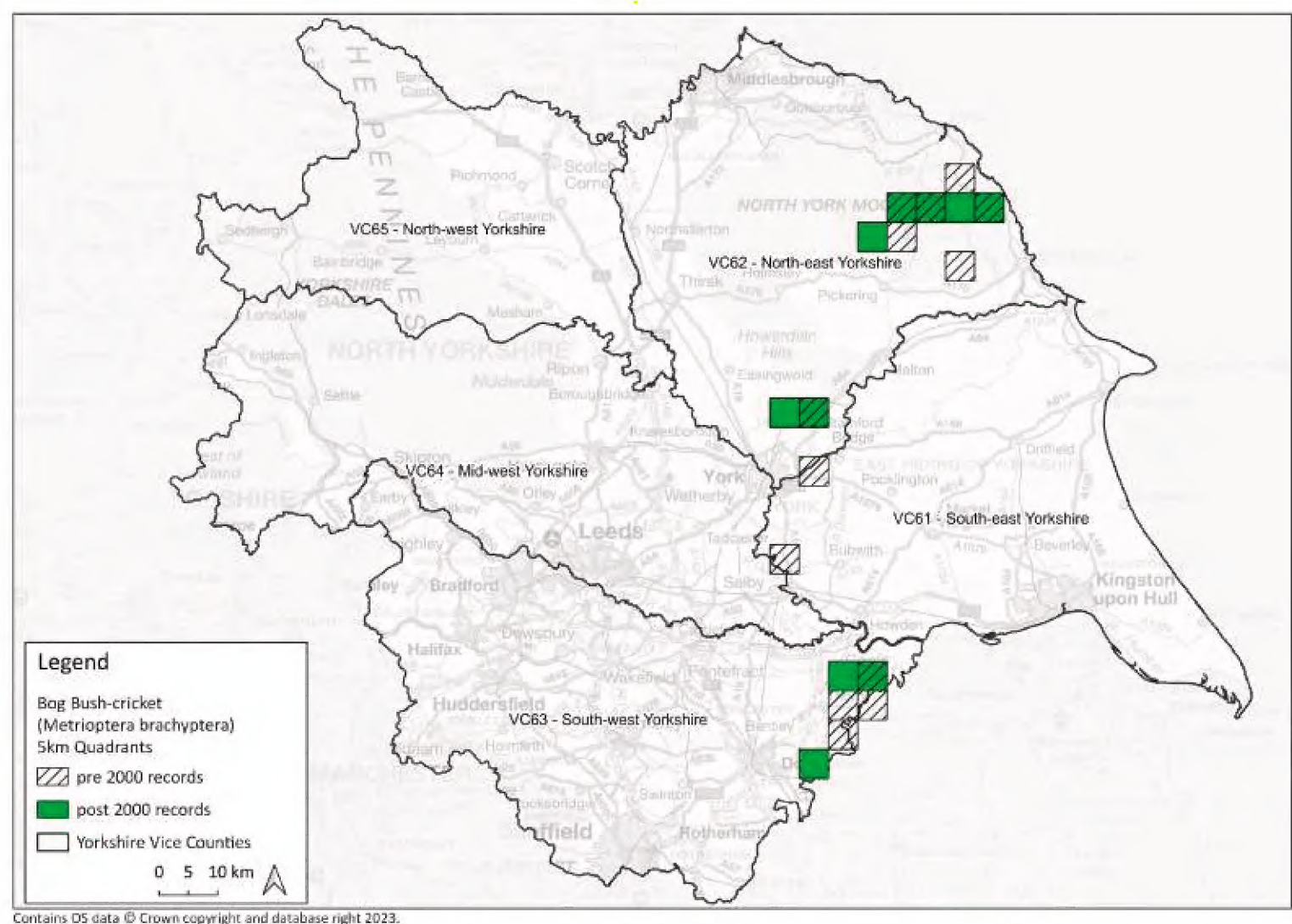


Figure 2. Map showing the distribution of the Bog Bush-cricket in Yorkshire. The pre-2000 and post -2000 records are displayed in 5 km squares. See article for the origin of the records used. Map produced by Phillip Whelpdale.

VC61

Just three records of Bog Bush-cricket (one unverified, could be a duplicate) from two sites came from VC61, with no records since 2000. Wet heath is indeed a very rare habitat in VC61, with the best sites being Skipwith Common and Allerthorpe Common.

Dunnington. 1947. No recent records. A single record collected in June, of a pair of nymphs collected by Reverend T.B. Kitchen (Hincks, 1949). The exact site is unknown but probably now

destroyed (Limbert, 1998).

Skipwith Common. 1992. No recent records. A single record by Andrew Grayson, possibly heard (Grayson 2023, personal communication, 1st August), possibly duplicated in the NBN gateway. No further records despite suitable habitat (Limbert, 1998). The site is a National Nature Reserve.

Table 1. Summary of historical and modern records of Bog Bush-cricket, *Metrioptera brachyptera* in Yorkshire. Pre-2000 Km² where there are also post-2000 records are highlighted in bold. The grid refs include the result of surveys for which records are not deposited in the NBN gateway and reported in Limbert (1986).

Site name	1st record	Grid ref (pre-2000)	Records (pre-2000)	Grid ref (post 2000)	Records (post -2000)
Dunnington	1947	?	1	-	0
Skipwith Common	1992	SE6437	1?	-	0
Fen Bog	1976	SE8597	2	SE8597, SE8598	5
Tranmire Bog	2017	-	0	SE8097	1
Newtondale	2008	-	0	SE8293	1
Cropton Forest	2012	-	0	SE7792	1
Wykeham Forest	1953	SE98	1	-	0
Fylingdales/Jugger Howe/Harwood	1956	SE9496, SE9497, SE9198*	3	SE9299, SE9399, NZ9400, SE9598	6
Strensall Common	1889	SE6360, SE6459, SE6461, SE6561,	12	SE6461, SE6559, SE6560, SE6561	14
Thorne/ Crowle Moors	1837	SE7115, SE7116, SE7117, SE7213, SE7214, SE7215, SE7216, SE7217, SE7218, SE7219, SE7314, SE7315, SE7316, SE7317, SE7413, SE7414, SE7416, SE7514, SE7515 &	10	SE7115, SE7514, SE7515, SE7415, SE7116	21
Hatfield Moors	1978?	SE6904, SE7105, SE7107, SE7006, SE7008 \$	3	SE6904	3 §

* note that Limbert gives NZ919982 in error.
& all but SE7413 are given in Limbert (1986) corresponding to surveys in 1969-84.
\$ Three km² given in Limbert (1986) resulting from surveys in 1978-80.
§ 2 records from Limbert and Kirk (2011).

VC62

A total of 31 records for VC61 were from seven areas, with 22 records in six sites since 2000.

Strensall Common. This site in the Vale of York holds a long-known population, since 1889. Records are found in 6 km² towards the north end of the site, with a core of 2 km² where both modern and historic records exist. The population appears to be stable given the number of recent records. The site is a SSSI and a Yorkshire Wildlife Trust (YWT) nature reserve.

Fylingdales/Jugger Howe/Harwood Dale Moor. The western half of the North York Moors houses important and probably under-explored Bog Bush-cricket populations, judging by the rate at which records have appeared at new sites across a large area. The species is known from before 1956, when Fylingdales Moor was reported as a site (Limbert, 1986), but records have been sporadic. I have regarded Fylingdales Moor, Jugger Howe Moor, Harwood Dale and Castlebeck and Scar Woods SSSI area as a single extended population, as habitat connectivity appears favourable to individuals dispersing between sites, possibly along the banks and bogs on Jugger Howe Dale and its tributaries. There are three pre-2000 grid squares and four post-2000, none of them shared. On a visit in July 2023 with the Hull Natural History Society I found five nymphs in two km², one new for the species and the first one in the Jugger Howe car park by the road. This suggests that revisiting some of the areas and prospecting in suitable habitat in between could be fruitful. Fylingdales area is part of the North York Moors National Park. Scar and Castlebeck Woods and Harwood Dale Moor are SSSIs and Harwood Dale Moor is a Woodland Trust reserve.

Fen Bog. A population has been present at this YWT nature reserve site since 1976 (Limbert, 1986). There are five post-2000 records. It is also a Special Area of Conservation (SAC), part of Newtondale SSSI and part of the North York Moors National Park.

Tranmire Bog. 2017. There are no historical records from this site. A mature female was found by Paul and David Ashton on 17/08/2017. Tranmire Bog is part of the North York Moors National Park.

Newtondale. A single record from 2008 by A. Godfrey. This is a new location for the species, sited about 5 km south of Fen Bog (which is also in the Newtondale catchment) part of Newtondale SSSI and Part of the North York Moors National Park.

Cropton Forest. A single record in 2012 by David Chesmore, now the westernmost record in the North York Moors National Park. This is a new location for the species on a track through a conifer plantation. Cropton Forest is managed by Forestry England.

Wykeham Forest. 1953. No recent records. A single record by W.D. Hinks collected on 12 September 1953 (dates appear wrong in the NBN Gateway where there is much duplication of this record). Hincks (1954) stated “The most interesting orthopteran of the year was a fine male of *Metrioptera brachyptera* (L.), taken in a heather-covered clearing in the middle of the Forestry Commission’s Wykeham Forest, V.C. 62, on September 12th. The Senior Research Officer, who was present at the time and who is familiar with the common insects of the forest, had not previously seen a bush cricket in the area so it is probably extremely local.”

Wykeham Forest. 1953. No recent records. A single record by W.D. Hinks collected on 12 September 1953 (dates appear wrong in the NBN Gateway where there is much duplication of this record). Hincks (1954) stated “The most interesting orthopteran of the year was a fine male of *Metrioptera brachyptera* (L.), taken in a heather-covered clearing in the middle of the Forestry Commission’s Wykeham Forest, VC62 (now managed by Forestry England) on September 12th. The Senior Research Officer, who was present at the time and who is familiar with the common insects of the forest, had not previously seen a bush cricket in the area so it is probably extremely local.”

VC63

A total of 23 records came from VC63 from two sites with 12 of them since 2000.

Thorne /Crowle Moors. One of the strongholds for the species in Yorkshire. First recorded in 1837 by Dale, when it was regarded as abundant, with several museum specimens collected in the 19th century (Limbert, 1987). The population appeared to contract in the second half of the 20th century arising from habitat loss due to industrial-scale peat extraction (Limbert, 1991) but it has persisted, with records after 2000 in four grid squares. Although this contrasts with the 19 grid squares pre-2000, these resulted from extensive surveys in 1969-84, prior to the designation of the area as a National Nature Reserve. The area is part of the Humberhead Peatlands National Nature Reserve. Part of Crowle Moor is a Lincolnshire Wildlife Trust nature reserve.

Hatfield Moors. The first secure records come from 1978 (but see Limbert & Kirk, 2011). Hatfield Moors was surveyed for this species in 1978-80 but only grid squares rather than records are reported (Limbert, 1986). There are 3 records post-2000, two of them described by Limbert & Kirk (2011) as ad-hoc records. Together with Thorne and Crowle Moors the site is part of the Humberhead Peatlands National Nature Reserve and a SAC and SPA.

Discussion

The Bog Bush-cricket remains a rare and localised species in Yorkshire. However, the continuous presence of several populations that appear to be thriving and the scarcity of recent records even in the best-known sites suggests a lack of awareness of the species rather than rarity in the sites where they are found. Since 2000, the species has been found in new sites some distance away from known populations, which, given the low dispersal ability of the species, might indicate survival of relict populations. The three new sites are not far from the long-known population at Fen Bog, suggesting that either the species might have been under-recorded or that there has been some range expansions with population connectivity between sites. These new locations rely on single records, so in the future surveying should confirm their persistence.

Despite their dispersal limitation, populations appear able to persist in suitable isolated habitat patches for decades (Poniatowski & Fartmann, 2010). As previously noted by Haes (1973), the species is also present in damp heaths within afforested sites (e.g. Cropton, Harwood and Wykeham), which means the potential distribution area of Bog Bush-crickets in the North York Moors might be much larger and better connected than previously thought. Specifically, the species might be able to persist, or colonise nearby suitable sites after clear-felling operations if suitable wet heath is found in woodland rides, ditches and clearings. In two sites there are

only very old records which suggest that the species might have suffered local extinctions (e.g. Dunnington, Wykeham). However, it must be noted that the Bog Bush-cricket must hold a record of a species reappearing after being considered extinct on a site. In Leziate, Norfolk, the species was rediscovered in 2006, more than 80 years after the previous record (Richmond, 2001).

Given the species' habitat requirements, habitat protection is the best conservation tool. Blanket bogs and lowland wet UK heaths are priority habitats and most populations are located, at least partially, in nature reserves. In Germany, light or occasional grazing by sheep resulted in the highest population densities (Poniatowski & Fartmann, 2011). Several of the Yorkshire populations are held in Yorkshire Wildlife Trust nature reserves, which are grazed with sheep to manage the open wet heath and reduce scrub encroachment (e.g. Fen Bog and Strensall Common). Modern management by the Forestry Commission in former heaths aims to increase habitat diversity and gradually reduce reliance on conifers (e.g. Cropton, Internet reference 2). However, *M. brachyptera* has no action plan in Yorkshire despite being a regionally rare species. In Staffordshire (Internet reference 3) the Biodiversity Action Plan for the species includes several recommendations, including habitat management, regular monitoring and surveys during the adult season, and potential reintroductions. In the Berkshire Heathland BAP (Internet reference 4) actions for the conservation of Bog Bush-cricket include sensitive management of wet heathland and mires including scrub and bracken control, water level management and sensitive grazing. The Bog Bush-cricket is also listed as a Local Priority Species at the Dumfries and Galloway Biodiversity Action Plan (Internet reference 5). A key aspect is the awareness of the general public and landowners.

The future remains uncertain for the Bog Bush-cricket given that the climate is likely to become drier and hotter in the UK, which will be a threat to the damp heaths and bogs favoured by the species. As a flightless habitat specialist it might not benefit from global warming (Beckmann *et al.*, 2015) and the range increases of the Roesel's Bush-cricket might increase competition between both species. On the positive side, recent conservation initiatives to re-wet blanket bogs and peatlands (for example at Jugger Howe, Internet reference 6), and local reintroductions to sites at Greater Manchester where it had become locally extinct (Internet reference 7) might help secure the future of the species.

Bush-cricket in general are an under-recorded group due to their cryptic colour patterns, skulking habits, and alertness, as they quickly scramble for cover when disturbed. Recent improvements in bush-cricket surveying include the use of ultrasound detectors like those used for bat surveys (Newson *et al.*, 2017). Ultrasound detectors can be tuned to the specific frequency of the calls, removing background noise, and have proven more efficient than just listening for calls. Use of bat detectors have helped map the distribution of bush-cricket in Norfolk (Newson *et al.*, 2017), and widened the known distribution of the localised Grey Bush-cricket in the UK (Gardiner *et al.*, 2010). Ultrasound surveys have been made for Bog Bush-cricket in the mosses of Greater Manchester and Liverpool with some success (Internet reference 8). To my knowledge, no Bog Bush-cricket recording using bat detectors has been undertaken in Yorkshire. The species has potential to become a flagship invertebrate species for blanket bog and peatland restoration initiatives. We would welcome the development of a specific Yorkshire Biodiversity Action Plan for this species.

It is likely that, although localised, the Bog Bush-cricket is more widespread than thought in Yorkshire. It is remarkable that even in the long-known sites, there is a dearth of records. Either the species is easily missed, or naturalists don't regard the records as valuable. A higher awareness of this handsome insect, together with the more widespread use of ultrasound detectors or remote acoustic devices in suitable habitats might yet reveal the existence of further populations. Finally, I would like to encourage members to submit records of this charismatic species.

Acknowledgements I'd like to thank Martin Limbert and Andrew Grayson for sharing copies of articles with me and comments on particular records. Harry Witts submitted some records upon request and Barry Warrington sent me records for submission to iRecord and shared his photographs. I am very grateful to the YNU county Orthoptera recorder Phillip Whelpdale, who reviewed the article, gave feedback and generously created the map shown in Figure 2. The NBN Atlas occurrence dataset was downloaded at <https://nbnatlas.org> accessed on Fri Jul 14 09:07:56 UTC 2023 and Fri Jul 14 10:10:22 UTC 2023. The data was contributed by: Biological Records Centre (2023), Grasshopper and Cricket (Orthoptera) and related species records from Britain and Ireland to 2007. (CC-BY v. 4.0); Grasshopper Recording Scheme, Natural England (2023), Invertebrate Common Standards Monitoring and ISIS Test Data (Open Government Licence), Natural Resources Wales. Contains Natural Resources Wales information © Natural Resources Wales and Database Right, Orthoptera Recording Scheme (2023); Orthoptera and Allied Insects of the British Isles data from iRecord (CC-BY v. 4.0); Yorkshire Wildlife Trust (2023) Non-sensitive records from all taxonomic groups (CC-BY-NC v 4.0).

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The veteran trees of Jacob Smith Park, Scriven, North Yorkshire

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Introduction

There is not a precise definition of veteran trees but, essentially, because of their age and life stage relative to others of the same species, they are of interest biologically, culturally or aesthetically (Read, 2000). The UK has one of the highest number of such trees in Europe (English Nature, 1999). They are associated particularly with wood pasture, a habitat comprising open pasture with scattered trees and shrubs and which is now recognised as supporting a particularly rich biodiversity (Alexander *et al.*, 2018). Well known examples of such habitats include the New Forest in Hampshire, Windsor Great Park in Berkshire, Moccas Park in Herefordshire and, in Yorkshire, Duncombe Park, near Helmsley.

Jacob Smith Park, formerly Scriven Park, near Knaresborough, has no nature conservation designations but is identified as a wood pasture and parkland Biodiversity Action Plan priority habitat (MAGIC, 2023). It is situated just under a kilometre north of the centre of Knaresborough and located mainly in the Ordnance Survey kilometre square SE3458. It lies on Permian calcareous mudstone bedrock from the Edlington Formation (272.3-252.2 Ma), overlain by Quaternary superficial deposits, mainly glacial till (116-11.8 Ka) (BGS, 2023). The soil is predominantly slightly acid loam and clay with impeded drainage (UK Soil Observatory, 2023). The park (Figure 1, p174) was part of the Scriven estate, which had been in the Slingsby family since around the 14th Century (Scriven Parish Council, 2023) and located within the original Forest of Knaresborough (Cantor, 1982; Muir, 2005). The estate included Scriven Hall, which was destroyed by fire in 1952. In 1965-66 the estate was broken up with lots being sold off. Over 30 acres of the Park were purchased by Dorothy and Winifred Jacob Smith, who used the parkland to graze Ayrshire cattle. In 2006 the park was bequeathed to Harrogate Borough Council on condition that it be used as a public park (Harrogate Borough Council, 2010), at which time it was renamed Jacob Smith Park. The year after, John Newbould and Adrian Norris of the YNU undertook a survey of the older trees and their potential biodiversity value for Harrogate Borough Council (Newbould, 2007). A further survey of trees by the Woodland Trust took place in 2023 and both are considered below, along with some of the biodiversity implications for the Park.

Methods

Tree girth was measured at breast height (traditionally taken as 1.3m above ground level), except where it was necessary to avoid epicormic tissue. Coppice was measured around the stool. The form of each tree was noted (standard, pollard, coppice or fallen) together with characteristics which help indicate whether the tree is entering, or has entered, the senescent phase of growth i.e. crown condition, presence of holes, standing dead/rotting wood, broken branches and hollow trunk. In addition, the ground flora vegetation around the trees was noted, together with other biodiversity observed. These were mainly incidental but there was a particular focus on the mollusc community associated with each tree.

2023 Survey: The Woodland Trust Ancient Tree Inventory (Woodland Trust, n.d.) was

interrogated when it emerged that a number of the relevant trees in Jacob Smith Park had been surveyed earlier in May 2023 by an experienced volunteer veteran tree assessor for the Trust. In addition, two of the trees from the 2007 survey had been assessed for the Woodland Trust in 2009 and 2010 respectively. The following characteristics of each tree were recorded: species, form, standing or fallen, living status, girth at 1.50m height, condition, veteran status (ancient, veteran or notable) and any observations of associated wildlife.

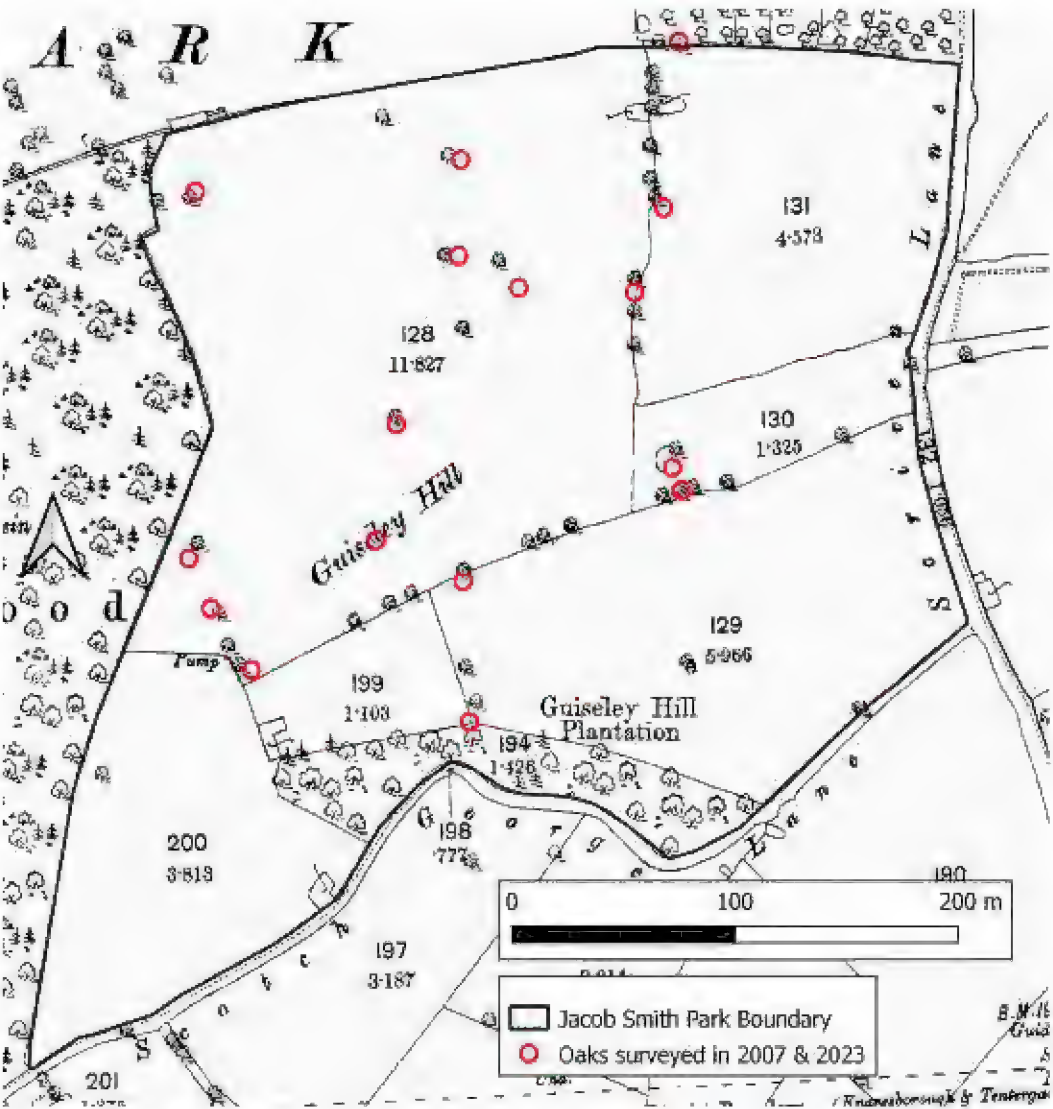


Figure 1. (left). 1890/91 Ordnance Survey map (1st Edition), of Scriven Park. GPS-determined locations of Oaks surveyed in both 2007 and 2023 are shown.

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Figure 2 (right). Stag-headed Oak, indicative of crown senescence, in Jacob Smith Park, September 2023.
Photo: A. Millard



Results

The 2007 survey recorded a total of 34 trees, the species composition of which is given in Table 1.

Table 1. Numbers of species of trees recorded at Scriven Park in 2007.

Common name	Species name	
Ash	<i>Fraxinus excelsior</i>	2
Beech	<i>Fagus sylvatica</i>	1
Hawthorn	<i>Crataegus monogyna</i>	6
Pedunculate Oak	<i>Quercus robur</i>	24
Sessile Oak	<i>Quercus petraea</i>	1
Total		34

With oaks forming the majority of trees it was decided to focus on these for further analysis. Of the 25 surveyed in 2007 four had since fallen, one of these still living and demonstrating ‘Phoenix Regeneration’ (new shoots) from the fallen trunk. Of the remaining 21 trees, 16 were also surveyed by the Woodland Trust in 2023. For each, features indicative of incipient or existing senescence (crown senescence – see Figure 2, presence of holes, standing dead/rotting wood, broken branches, hollow trunk) noted in 2007 were summed to give a crude index of senescence (Table 2 p176). Estimates of age from 2007 girth measurements were calculated using a method based on White (1998). This incorporates quantitative data gathered from many specimens of several tree species, including oak, growing in a variety of specific conditions. The category for oak deemed most appropriate here was ‘Average site, garden, parkland.’ For trees showing signs of senescence, White incorporates a stage in the process which requires an estimate of when senescence began. This was not possible to ascertain and so the ages estimated in Table 2 are probably minimum values with clear evidence of senescence indicating a greater real age. Girth measurements from the 2023 survey were also used to estimate minimum ages. These showed an increase on those from 2007, the magnitude of increase averaging 0.33m but varying considerably between 0 and 1.04m. The mean estimated minimum age derived from girth measurements in 2007 was 216 years and from 2023 measurements, 243 years. There is no correlation between the 2007 estimated minimum age and index of senescence (Spearman Rank Correlation Coefficient = 0.5029, $p>0.05$, $n=16$).

In 1890/91 the majority of trees appear to have been along field boundaries, probably hedgerows, which are no longer present. The location of former field boundaries and position of the 16 oaks surveyed in both 2007 and 2023 are shown on Figure 1. The distance between a surveyed oak and the centre of the nearest tree symbol on the 1890-91 map ranged from 1.63m to 41.52m with a mean distance of 8.02m.

Associated biodiversity

In 2007 herbaceous vegetation in the vicinity of the trees was classified as National Vegetation type MG6 *Lolium perenne*–*Cyanosurus cristatus* grassland, while under some trees the high nutrient levels left beds of stinging nettle forming OV24 *Urtica dioica*-*Galium aparine* community, in many instances accompanied by the alien Indian Balsam *Impatiens glandulifera*.

A few trees surveyed on woodland edges had woodland ground flora plant communities e.g. W10 *Quercus robur*-*Pteridium aquilinum*-*Rubus fruticosus* woodland. Generally trees with Dog's Mercury *Mercurialis perennis* as a component of the ground flora were only found on a bank east of Low Wood, close to the west boundary of the park.

Table 2. Sample of Oak specimens in Jacob Smith Park, Scriven, surveyed in both 2007 (Newbould, 2007) and 2023 (Woodland Trust, n.d.). The Woodland Trust categorises trees as 'veteran' if having some features of ancient trees but not as old; 'notable' if they stand out in the local environment because they are large in comparison with other trees around them.

2007 Survey											2023 Survey		
Ref.No	Grid Reference	Girth (m) at 1.3m height	Estimated age (year excluding phase of senescence)	Crown Senescence (including stag's head)	Standing dead wood	Holes in tree	Rotting wood	Broken branches	Hollow trunk	SENESCENCE INDEX	Status	Girth (m) at 1.5m height	Total years (age of outer section + core age)
6924	SE3480758286	3.44	173	1	1	1				3	Notable	4.48	258
6927	SE3480058213	3.02	145	1	1	1				3	Veteran	3.40	170
6931	SE3478758176	4.22	235	1		1	1	1		4	Veteran	4.40	251
6933	SE3480458099	3.83	202	1	1	1	1	1		5	Veteran	4.22	235
6934	SE3480858089	4.56	266		1	1	1	1		4	Veteran	5.03	313
6939	SE3471058049	3.14	152		1	1	1	1	1	5	Veteran	3.65	188
6940	SE3467158067	4.00	216	1	1	1	1			4	Notable	4.00	216
6941	SE3461558010	3.58	183							0	Notable	3.83	202
6943	SE3459758037	4.20	233	1	1	1				3	Notable	4.47	257
6944	SE3458758059	4.90	299	1	1	1	1	1		5	Veteran	4.99	308
6948	SE3468058118	3.82	201				1	1		2	Notable	4.10	224
6950	SE3473558178	4.24	237		1	1	1	1		4	Notable	4.50	260
6951	SE3470858192	3.85	204	1		1	1	1		4	Notable	4.09	224
6952	SE3470958234	4.21	234	1	1	1	1	1		5	Notable	4.46	256
6954	SE3459058220	4.64	273		1		1	1		3	Veteran	4.85	294
0593	SE3471357987	3.75	196	1				1		2	Notable	4.13	227

Molluscs recorded in association with the trees surveyed were all common, widespread species. Numbers of occurrences are given in brackets after each species: Smooth Glass Snail *Aegopinella nitidula* (3); Dusky slug *Arion subfuscus* (6); Dotted Slug *Arion circumscriptus* (1); White-lipped Snail *Cepaea hortensis* (1); *Deroceras panormitanum* (6); Grey Field Slug *Deroceras reticulatum* (11); Discus Snail *Discus rotundatus* (2); Tree Slug *Lehmannia marginata* (1); Leopard Slug *Limax maximus* (6); Garlic Snail *Oxychilus alliarius* (1); Copse Snail *Arianta arbustorum* (1).

Fungi recorded (again with number of occurrences in brackets) were also common and widespread species. One of the two veteran Ash trees surveyed in 2007 and with an estimated minimum age of 197 years hosted the following four fungal species: King Alfred's Cakes *Daldinia concentrica* (2); Beech Woodwart *Hypoxylon fragiforme* (1); Turkey Tail *Trametes versicolor* (4); Dryads Saddle *Polyporus squamosus* (1). Other fungi recorded were Shelf Fungus *Ganoderma adspersum* (1) and Jelly Ear Fungus *Auricularia auricula-judae* (3).

No YNU VC64 excursions have occurred at Jacob Smith Park and no other YNU records from the site could be found. Records from the National Biodiversity Network, iRecord and iNaturalist databases since 2011 are largely for common and widespread species. However, two are of some interest. The staphylinid beetle *Siagonium quadricorne* was found on the northern boundary of the Park in 2022. This beetle is widespread but very local with most records south of a line from the Humber to the Mersey. Its typical habitat is damp woodland with dead timber present (UK Beetles, 2023). The second record of interest is the Purple Hairstreak butterfly *Favonius quercus*, recorded in 2018 and 2019.

Discussion

Tree Age: Estimating tree age without damaging the tree is inevitably an imprecise process. Mitchell's rule of 2.5cm (1 inch) girth per year (Mitchell, 1974) provides a good starting point for average trees in average conditions. However, White (1998) provides a methodology which takes account of variations in species and environmental conditions. On this basis, the minimum ages of oaks sampled in 2007 ranged from 145 to 299 years and from the 2023 Woodland Trust survey 170 to 313 years. The mean increase in girth from 2007 to 2023 of 33cm computes to the passage of 27 years as opposed to the actual 16 years that have passed. There are anomalies in the data e.g. an increase in girth of 1.04m over 16 years in tree 6924. This is located close to other oaks and it may be that different trees were measured in 2007 and 2023. There are clearly a number of possible sources of error:

- the successful identification of individual trees in 2023 which had been surveyed in 2007. Newbould (2007) indicates possible error rates of 7-10m in determining grid co-ordinates which could have a particular impact with trees growing close together.
- Girth measurements were made at 1.3m height in 2007 and 1.5m height in 2023. Although this is unlikely to have a major impact on measurements, there may be other variations in how the measurements were obtained in the two surveys.

The relationship between the surveyed trees and tree symbols on the 1890-91 map suggests that many of the former were shown individually on the latter map. Eleven out of 16 oaks surveyed were within 7m of the old map symbol. This falls well within the margin of error given by Newbould (2007) for determining grid references and, even allowing for inaccuracies in the plotting of tree locations in 1890-91, suggests that many of the older trees currently in the open pasture of Jacob Smith Park were recorded as mature trees in 1890-91. Taking the map evidence, together with the fact that White's approach to take account of signs of senescence in estimating tree age was not used, it seems probable that there are trees in the park that are well over 300 years old, as suggested by Newbould (2007).

Associated Biodiversity: No records have been found before 2007, which probably reflects the fact that prior to this date the Park was private, without public access. The John Newbould

and Adrian Norris survey (Newbould, 2007) recorded a number of relatively common and widespread molluscs and fungi, together with incidental observations of a small number of other common birds and invertebrates. Likewise, records in online databases from 2011 onwards were relatively few and for common, widespread species, although the staphylinid *Siagonium quadricorne* offers the tantalising prospect of other species associated with dead wood in a long-established wood pasture community. The nearby presence of Hawthorn noted in the 2007 survey indicates potential nectar and pollen sources for some of the associated insect fauna.

The herbaceous National Vegetation communities recorded in the 2007 survey (MG6 *Lolium perenne*–*Cyanosurus cristatus* and OV24 *Urtica dioica*-*Galium aparine*) suggest relatively high levels of nutrients, particularly in the case of the latter community, and consequently reduced chances of finding species of particular botanical interest. It was noted that during a visit in September 2023 a large proportion of people using the Park were dog walkers, an activity known to have significant effects on plant communities (Harris, 2023).

Conclusion

Jacob Smith Park is a long-established wood pasture community, dominated by oak trees, some of which are likely to be in excess of 300 years old. The associated biodiversity is clearly under-recorded and more detailed surveys, particularly for saproxylic fauna and associated species, would be well worth undertaking.

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Yorkshire Plant Gall Recorder's report for 2022

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Number of records verified

This report is based primarily on all Yorkshire records of Eriophyidae, Phytoptidae, Cecidomyiidae and Cynipidae on iRecord added in 2022 (i.e. for galls recorded in 2022 or earlier), as well as a few 2022 records not yet added to iRecord and some earlier records that were missed in the previous report. Two records are of galling microfungi. In this time period, 856 records had been added on the main iRecord site and 90 on iNaturalist and filtered through to iRecord. See Buckton (2022) for details on how records are assessed.

Notable records

All bar seven of the records can be found by querying the iRecord database; I have included record IDs for each record for ease of searching. In each entry I include (in order) the causer name, record ID(s), location, vice-county (VC), recorder and notes. Species names followed by an asterisk (*) are new to the vice-county; those followed by two asterisks (**) are new to all Yorkshire.

ERIOPHYIDAE

Aceria centaureae* ID 25008026 15/04/2022 Haugh and Gundale Slacks SSSI Unit 3 (SE800880) VC62 Sam Newton. Galls frequent on leaves of Greater Knapweed *Centaurea scabiosa* in calcareous grassland in a woodland clearing.

Aceria labiatiflorae* 18/09/2019 High Batts Nature Reserve, North Stainley (SE3076) VC64 Jill Cunningham. Galls on Marjoram *Origanum vulgare*. An earlier record of this uncommon species than the one reported in Buckton (2022) that has recently come to light.



Figure 1 (above). New Zealand Pigmyweed *Crassula helmsii* showing pink galls caused by the mite *Aculus crassulae*. Potteric Carr, Doncaster, 22/07/2022 (Photo: Jim Horsfall)



Figure 2 (above). A 'big bud' gall of *Cecidophyopsis psilaspis* on Yew *Taxus baccata*. St Nicholas Fields, York, 30/03/2022 (Photo: Jane Thomas)



Figure 3 (left). Galls in flowers of Blackcurrant *Ribes nigrum* caused by *Cecidophyopsis ribis* (an example gall indicated by arrow). Nidd Hall, Harrogate, 15/05/2022 (Photo: Jill Cunningham)



Figure 4 (below). A larva of *Arthrocnodax fraxinellus* from a gall of *Aceria fraxinivora* on Ash *Fraxinus excelsior*. Collected at St Nicholas Fields, York, 06/10/2021 (Photo: Sam Buckton)



Figure 5 (left). A gall of *Andricus seminationis* on a Pedunculate Oak *Quercus robur* catkin. Balby, Doncaster, 04/06/2022 (Photo: Ian Farmer)

Aculus crassulae** 21/06/2022 Potteric Carr Nature Reserve, Doncaster (SE594001) VC63 Jim Horsfall. This mite, described only as recently as 2018 from Australia (Knihinicki *et al.*, 2018), was approved for release in England and Wales that year as a biocontrol agent for the invasive non-native New Zealand Pigmyweed *Crassula helmsii* (Varia *et al.*, 2022). The mite creates pink-coloured ‘big buds’ and thickened, curled leaves (Varia *et al.*, 2022) (Figure 1). I gather that there have been earlier Yorkshire releases at Rossett Local Nature Reserve in Harrogate (20/06/2022) and several Yorkshire Water sites in 2021, but despite requests for information I am still awaiting record details. Anecdotally, the mites have so far had little impact in controlling the Pigmyweed, although they may take years to build up a sufficient abundance (Jim Horsfall & Kevin Walker, pers. comm.).

Cecidophyopsis psilaspis* ID 25009769 30/03/2022 St Nicholas Fields, York (SE615517) VC62 Molly Richardson. ‘Big bud’ galls on Yew *Taxus baccata* (Figure 2). Possibly an overlooked gall in Britain – it is certainly less obvious than the more commonly recorded ‘artichoke gall’ caused by the gall midge *Taxomyia taxi*. Most Yorkshire records are in VC63, although there is one VC64 record.

Cecidophyopsis ribis** ID 25388936 15/05/2022 Nidd Hall, Harrogate (SE3060) VC64 Jill Cunningham. At least ten ‘big bud’ galls on Blackcurrant *Ribes nigrum* (Figure 3). There are few records of this species in Britain, and these are mostly in the south.

CECIDOMYIIDAE

Arthrocnodax fraxinellus** ID 22481236 06/10/2021 St Nicholas Fields, York (SE615516) VC62 Sam Buckton (Figure 4). Found inside galls of *Aceria fraxinivora* on Ash *Fraxinus excelsior*, where it is a predator of the mites. Probably very under-recorded and likely to be widespread. Simon Haarder assisted in verifying the record.

Contarinia loti ID 29025371 18/09/2005 Sandall Beat Wood, Doncaster (SE60) VC63 Leonard Worthington. This is the first Yorkshire record of *C. loti* since 1975. It galls flowers of bird’s-foot trefoils *Lotus* spp. Accepted as considered correct (photos not included) because the recorder is trusted.

Contarinia tragopogonis* ID 27975301 02/07/2006 Woodkirk area (SE282241) VC63 Chris Yeates. Galls in flowers of Goat’s-beard *Tragopogon pratensis*. An excellent record from the late Chris Yeates, who often recorded galls as well as fungi. As well as being a vice-county first, this was the first Yorkshire record of *C. tragopogonis* since pre-1922.

Dasineura kiefferi ID 29207992 01/10/2022 Bull Ings Lane, near Westfield Grange, Cropton (SE753879) VC62 Sam Newton. Gall on a flower of Ivy *Hedera helix*. The first Yorkshire record of this midge since 1916; it is also poorly recorded nationally.

Dasineura gleditchiae** 15/07/2008 Front garden of 5 Spennithorne Road, Skellow, Doncaster (SE527112) VC63 Tom Higginbottom. Galls on leaves of Honey Locust *Gleditsia triacanthos*; it has been present at this site ever since, although not formally reported. There have been two other more recent finds of this gall on the same host in other Yorkshire vice-counties, listed below.

Dasineura gleditchiae* Summer 2020 Wentworth Way, University of York Campus West, York (SE618507) VC61 Sam Buckton.

Dasineura gleditchiae* ID 28009911 03/09/2022 Templegate Road, Temple Newsom, Leeds (SE35743315) VC64 Jill Cunningham.

Macrolabis incolens** ID 21802329 31/08/2021 Top of bank beside University Road, University of York Campus West, York (SE62135081) VC61 Sam Buckton. An inquiline inside galls of *Jaapiella veronicae* on flowers of Germander Speedwell *Veronica chamaedrys* – its white larvae stand out amongst the orange larvae of *J. veronicae*. Like *Arthrocnodax fraxinellus*, likely to be widespread but overlooked. It has subsequently been found on the same host in VC62, listed below.

Macrolabis incolens* ID 21808612 01/09/2021 St Nicholas Fields, York (SE61665183) VC62 Sam Buckton.

CYNIPIDAE

Andricus corruptrix* ID 28313075 07/10/2022 Piercebridge, Richmondshire (NZ21021512) VC65 Jill Cunningham. An agamic generation gall on bud of Pedunculate Oak *Quercus robur*. ‘All seen in [a] tiny patch of trees that look as though they used to surround a pond.’ A species known previously only from VC61 and VC63 in Yorkshire.

Andricus seminationis** ID 33701046 04/06/2022 Playing field, Balby, Doncaster (SE5501) VC63 Ian Farmer. Agamic generation galls on Pedunculate Oak (Figure 5, p180). This is a rare gall in Britain; it is spindle-shaped and emerges from catkins or leaves. It is similar to galls of *A. callidoma* and *A. malpighii*, but these arise from a bud.

Phanacis caulicola** 13/04/2022 Bankdale, Tickton (TA0541) VC61 Bill Dolling. Reared from stems of Bristly Oxtongue *Helminthotheca echioides*. This wasp, which causes subtle stem galls that are barely noticeable unless exit holes are present, was previously known only from south England and East Anglia. As Bill describes: ‘The site is a former hayfield beginning to scrub over. Plant samples were taken in March 2022 and kept in a warm room. Parasite emergences began on 31/03/2021 and had virtually ceased by 19/04/2021. The gall-causer began to emerge on 13/04/2022 and [were] still going great guns [by] 27 April. On 27/04/2022 a large sample of the gall-causer was collected to obtain a sex ratio, which was heavily female-biased (112 females to 10 males).’ The parasitoids reared from the galls included a *Eurytoma* sp. (Eurytomidae) of the *rosae* group (presumably *centaureae*), the eupelmid *Macroneurus vesicularis*, and the pteromalids *Homoporus subniger*, *Stinoplus etearchus*, and a mystery *Stinoplus* sp.

Phanacis centaureae* 22/04/2022 Etton Wold (SE9343) VC61 Bill Dolling. Reared from Common Knapweed *Centaurea nigra*. Like *P. caulicola*, this species causes very slight and easily missed stem swellings. It was previously known only from VC63. Two females emerged (or were at least killed) on 22/04/2022 and one on 15/04/2022, but as they were kept in Bill’s warm study they ‘probably would have emerged much later in the field’.

FUNGI

Microbotryum saponariae** 10/09/2021 Denaby Main (SK493997) VC63 Ian Farmer. Galls in the anthers of Soapwort *Saponaria officinalis*. This smut is absent from the unpublished Yorkshire checklist compiled by Chris Yeates before his death.

Milesina murariae* ID 13126914 30/03/2020 Spring Lane, University of York Campus West, York (SE62495031) VC61 Sam Buckton. Galls on the fronds of Wall-rue *Asplenium ruta-muraria*. In his unpublished Yorkshire rust fungi checklist, Chris Yeates writes: ‘A handful of Yorkshire

records, all on walls, of this Atlantic rust which seems to be genuinely very rare in England. The host ... is not uncommon throughout the county, and the rust is possibly much more widespread than the records suggest, as sometimes only a few sori can be detected on fronds which are sporulating normally. The recent extension eastwards ... serves to underline that it is probably much overlooked.' There are previous records in VCs 63 and 64.

Acknowledgements

I am grateful to all the gall recorders in Yorkshire for keeping me busy! Thanks also to Ken Merrifield for querying the British Plant Gall Society database on request. I would like to dedicate this paper to the memory of Chris Yeates, who often recorded galls, and whose microfungi checklists have been an immensely valuable resource.

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The floristic recognition of Upper Teesdale: the key manuscript

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Upper Teesdale is one of the most important botanical sites in Britain. It was notified by the then Nature Conservancy (now Natural England) as a Site of Special Scientific Interest in 1951 (Nature Conservancy, 1990) and has been the subject of extensive study and conservation efforts by the eminent botanist and YNU member, Margaret Bradshaw (Bradshaw, 2012; 2023). The purpose of this paper is to highlight some of the individuals who were instrumental in discovering and publicising this unique flora.

The original botanical pioneer of Upper Teesdale was the Rev. Ralph Johnson (1629-1695) of Brignall in (lower) Teesdale (Horsman, 1995, 2021). He contributed significantly to natural history in northern England and was a friend of John Ray (Horsman, 2023). Early in the 17th century he discovered the Shrubby Cinquefoil *Potentilla fruticosa* at two sites, near Thorpe and at Egglestone Abbey by the River Tees, not far from his home in Brignall. He showed Thomas Willisel (1621-?1675), a fellow naturalist who toured northern England with John Ray (Horsman, 2023), these two sites in 1664 (Morison, 1699). However, he could not finally identify the plant until Ray visited in 1671, having previously pronounced it new to science (Ray, 1670).

There are two enigmatical, botanical records for County Durham in the first half of the 18th Century in Gibson's revision of Camden's *Britannia* (Gibson, 1722). One is for *Tofieldia pusilla* (Scottish Asphodel): 'On a fell in this county [Durham] about a mile east from Birdale [Birkdale]

Table 1. The ‘Teesdale rarities’ as listed in Edward Robson’s *Plantae rariores (sic) agro Dunelmensi indigenae*. Plants for which Upper Teesdale is best known are indicated with an asterisk *. Many species still have their Linnaean names, in line with Godwin & Walters (1967) who state that most of the more obvious vascular plants in Upper Teesdale had been identified by the end of the eighteenth century.

* <i>Bartsia alpina</i> L.	Alpine Bartsia.
* <i>Cistus marifolius</i> (<i>Helianthemum canum</i> (L.) Baumg. subsp. <i>levigatum</i>).	Hoary Rockrose.
* <i>Dryas octopetala</i> L.	Mountain Avens.
* <i>Gentiana verna</i> L.	Spring Gentian.
* <i>Potentilla fruticosa</i> L.	Shrubby Cinquefoil.
* <i>Tofieldia palustris</i> (<i>Tofieldia pusilla</i> (Michaux) Pers.).	Scottish Asphodel.
<i>Arbutus uva-ursi</i> (MS entry). (<i>Arctostaphylos uva-ursi</i> (L.) Sprengel).	Bearberry. Discovered May, 1798.
<i>Arenaria verna</i> (<i>Minuartia verna</i> (L.) Hiern).	Spring Sandwort.
<i>Asplenium viride</i> Huds.	Green Spleenwort.
<i>Carex capillaris</i> L. (MS entry).	Hair Sedge. Discovered 1796/97, identified 1800.
<i>Draba incana</i> L.	Hoary whitlow-grass.
<i>Galium boreale</i> L.	Northern Bedstraw.
<i>Geranium sylvaticum</i> L.	Wood Crane's-bill.
<i>Gnaphalium dioicum</i> (<i>Antennaria dioica</i> (L.) Gaertner).	Mountain Everlasting.
<i>Juncus triglumis</i> L.	Three-flowered Rush.
<i>Malaxis paludosa</i> (<i>Hammarbya paludosa</i>) (L.) Kuntze).	Bog Orchid.
<i>Melampyrum sylvaticum</i> (MS entry).	Small Cow-wheat. Discovered May, 1798.
<i>Ophrys cordata</i> (<i>Listera cordata</i> (L.) R. Br.).	Lesser Twayblade.
<i>Plantago maritima</i> L.	Sea Plantain.
<i>Polygonum viviparum</i> (<i>Persicaria vivipara</i> (L.) Ronse Decraene).	Alpine Bistort.
<i>Primula farinosa</i> L.	Bird's-eye Primrose.
<i>Rhodiola rosea</i> (<i>Sedum rosea</i> (L.) Scop.).	Roseroot.
<i>S. aizoides</i> L.	Yellow Saxifrage.
<i>S. stellaris</i> L.	Starry Saxifrage.
<i>Satyrium albidum</i> (<i>Pseudorchis albida</i> (L.) A. & D. Love).	Small-white Orchid.
<i>Saxifraga hypnoides</i> L.	Mossy Saxifrage.
<i>Sedum villosum</i> L.	Hairy Stonecrop.
<i>Statice armeria</i> (<i>Armeria maritima</i> (Miller) Willd.).	Thrift.
<i>Thalictrum alpinum</i> L.	Alpine Meadow-rue.
<i>Thlaspi alpestre</i> (<i>T. caerulescans</i> J.S. & C. Presl).	Alpine Penny-cress.
<i>Trollius europaeus</i> L.	Globeflower.

Any botanist reading this list would appreciate that the flora of Upper Teesdale is rich, containing a large number of rare plants in a relatively small area. Edward Robson compiled this list of plants so he could exchange specimens for those he included in his *Plantae desideratae* (Figure 2).

Harriman, principally remembered as an (unfulfilled) lichenologist, is credited with bringing to notice the Spring Gentian (*Gentiana verna*) in Upper Teesdale, only the second record for Britain, the first being in the Burren in the west of Ireland by Rev. Richard Heaton (1601-1666) by 1640 (Walsh, 1978). The locals in Teesdale Forest knew this gentian well because of its brilliant blue flower, but they couldn't give it a botanical name (Bellamy & Mackie, 1981). The collaboration between Harriman, Oliver and Robson is illustrated by the extract of Robson's *Plantae rariores (sic) agro Dunelmensi indigenae*, annotated by Harriman (Figure 1, p184).

The Bog orchid and Three-flowered rush from the printed list were discovered by Binks, before 1 May 1798, in 1796 or 1779 (Horsman, 2021: 34), as is the case with *Carex capillaris*.

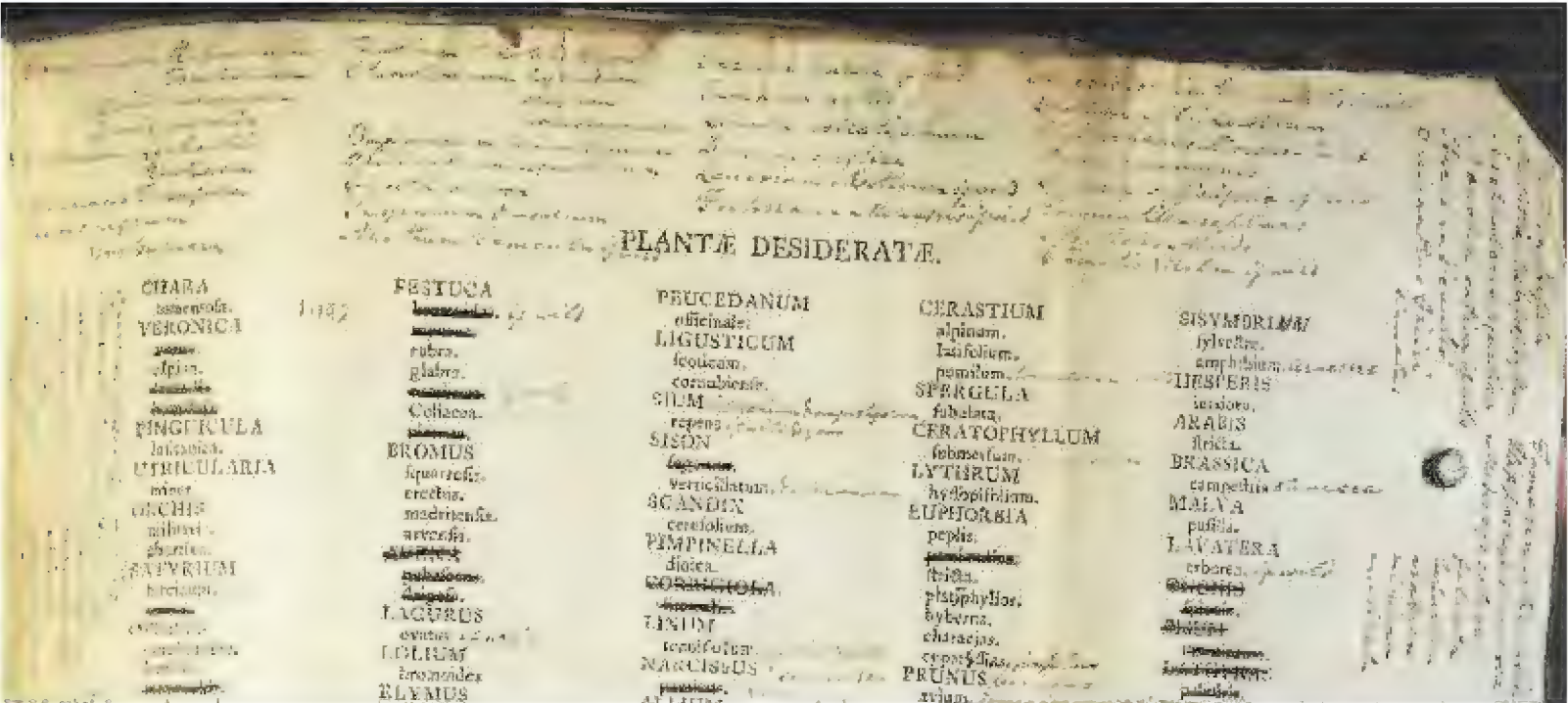


Figure 2. Extract from Robson's *Plantae desideratae* with numerous annotations by Harriman.

Subsequent to the appearance of Robson's *Plantae rariores (sic)...*, in the period 1798 to 1805, as well as Harriman, Oliver and Binks, a number of other individuals went in search of the Teesdale botanical sites, perhaps hiring Binks as a guide. James Dickson (1738-1822), the cryptogamist, visited in 1799. Another Quaker botanist, William Brunton (1775-1806) of Ripon in North Yorkshire visited in 1800, and Nathaniel J. Winch (1768-1838), who was so botanically stimulated by the area that he visited it no fewer than four times in as many consecutive years, in 1799-1802. The botanical rewards of these Winch visits are to be seen in his annotations to his set of *Withering* (1812), which is in the library of The Linnean Society of London. The additional plants identified between 1798 and 1805 are listed in Table 2.

Table 2. Upper Teesdale species, their locations and discoverers, identified between 1798 and 1805.

Scientific name	Vernacular name	Location	Discoverer
<i>Arctostaphylos uva-ursi</i>	Bearberry	nr. Winch Bridge	Binks
<i>Convallaria majalis</i> §	Lily-of-the-valley	"	Harriman
<i>Eriophorum latifolium</i> *	Broad-leaved Cottongrass	Whey Syke, Teesdale	James Dickson (1738-1822)
<i>Kobresia simpliciuscula</i> *	False Sedge	Cronkley	"
<i>Melampyrum sylvaticum</i> §	Small Cow-wheat	"	William Brunton (1775-1806) & Harriman
<i>Polystichum lonchitis</i>	Holly Fern	Falcon Clints	Oliver
<i>Potentilla crantzii</i>	Alpine Cinquefoil	"	Brunton and Harriman
<i>Saxifraga hirculus</i>	Marsh Saxifrage	"	Binks
<i>Vaccinium uliginosum</i>	Bog Bilberry	nr. Winch Bridge	Binks

* new to science.
§ *Carex capillaris* (see Table 1), *Convallaria majalis* and *Melampyrum sylvaticum* are all manuscript entries in *Plantae rariores... (sic)* made by Harriman.

The post-1805 plant discoveries in Upper Teesdale are dealt with by Horsman (1990, 2021) and Bradshaw (2012).

Thus, *Plantae rariores...* marks the first recognition by experienced botanists of the botanical value of Upper Teesdale. It brought to notice some of the “Teesdale rarities” and the recognition that there were a large number of rare plants growing in a small area, providing the impetus for further extensive botanising in Upper Teesdale.

The plant discoveries made in the period 1798 to 1805 are recorded in *The Botanists Guide through the counties of Northumberland and Durham*, Nathaniel J. Winch (1768-1838), John Thornhill (1760-1826), and Richard Waugh (d.1806). Vol.1 (1805), Vol. 2 (1807). The publication of this flora in 1805/07 following *Plantae rariores...* in 1798 can be said to mark the floristic recognition of Upper Teesdale.

Acknowledgments

I would like to thank Andrea Deneau and Isabelle Charmantier, both of The Linnean Society of London; Andrea for providing me with an excellent copy of Robson’s *Plantae rariores (sic)...* and Isabelle for helping me to re-find this manuscript. Stuart Hedley and Peter Davis provided feedback on my self-published book.

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The book *Who discovered the "Teesdale rarities"?* is available from the author. Cost: £22 including postage.

Some notes on the former abundance and recent declines of a selection of bird species in the valleys of the Rivers Nidd and Lower Ure

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Introduction

Anyone having taken up birdwatching as a hobby during the last 20 or 30 years may find it hard to believe, and perhaps difficult to imagine, the former abundance of many species and to understand the reasons for their dramatic declines. The present paucity of small birds in the countryside must be obvious to even the casual observer. The situation is of national concern and a review of the records published in the works of Nelson (1907), Chislett (1952), Mather (1986 and 2001), Walker (1977 and 1991), and also the Annual Bird Reports of the Harrogate and District Naturalists' Society (HDNS) which cover the valleys and environs of the Rivers Nidd and Lower Ure (Figure 1.), the area of which forms the basis for this review (hereafter - the district), clearly illustrates the former abundance and subsequent declines.

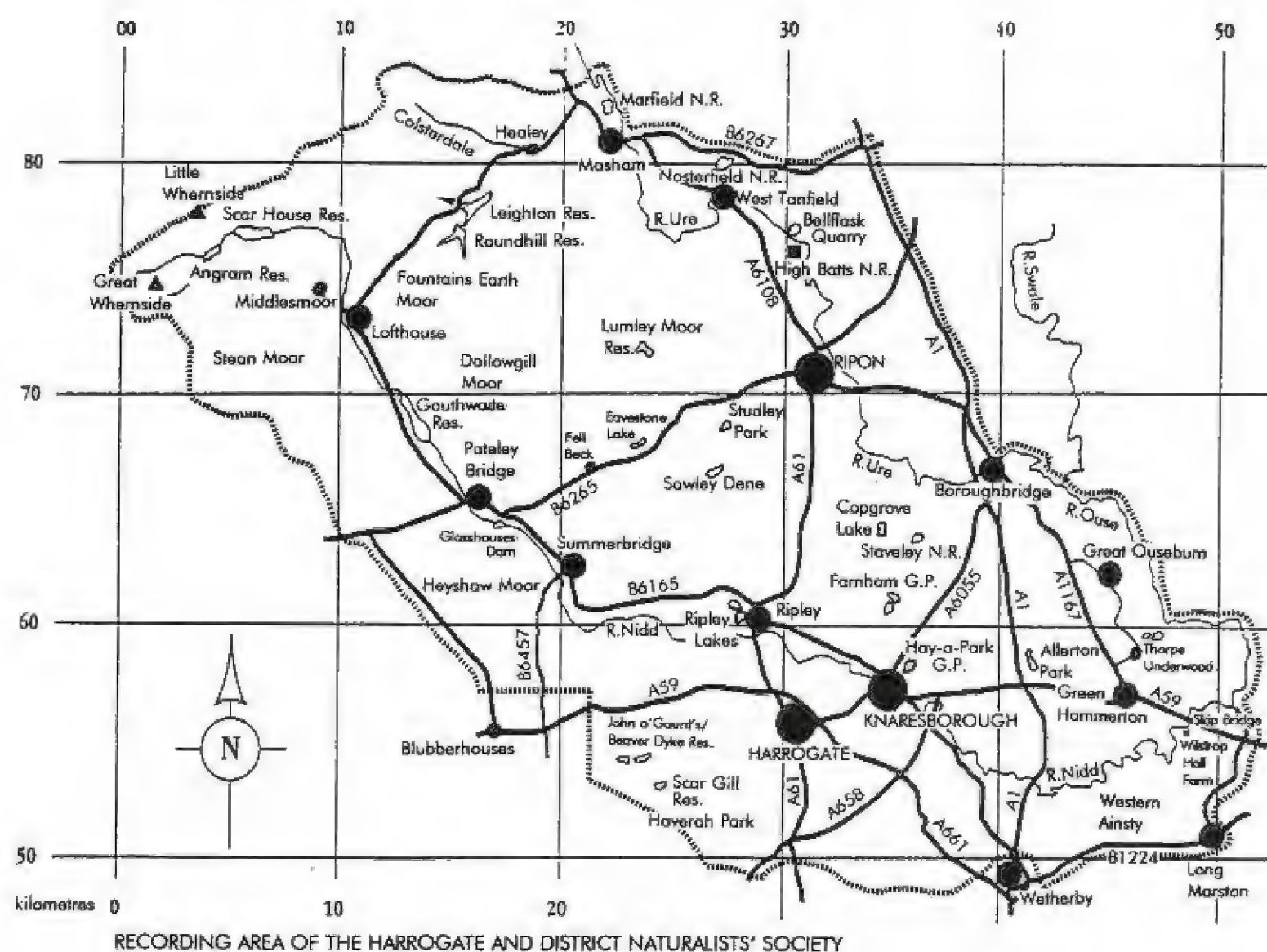


Figure 1. Map showing the extent of 'the district' covered by the Naturalists' Society

I have checked the numerical status of 19 species for the years up to 2021 and give a summary of their former and present status, with a brief mention of a further six. Various factors are responsible for their declines, some natural, others man-made. Climate change is now having a

deleterious effect on habitats along the migration routes of some of the summer visitors and, locally, the loss of land on the low ground in the east and south of the district for industrial development and housing, intensified agricultural practices and the use of pesticides all play their part. The lack of winged insects cannot go unnoticed particularly by those who remember having to clean the headlights and windscreens of their motorcars, which had been splattered by myriads of juicy moths and flies during long journeys.

The changes in harvesting grain have, undoubtedly, had the most serious effect on the fortunes of many species, especially small seedeaters, robbing them of their main autumn and winter food supply which was formerly available in the stubble fields and stackyards. For the benefit of 'younger' readers, who may not be familiar with the farming practices in those seemingly far off days, I outline the procedures. During the 19th and to the late 20th Centuries, harvesting was a very different and prolonged labour-intensive operation. The corn was cut in September by reaping machines with rickety wooden flails and metal blades, then tied into sheaves, piled by hand into tent-like stooks and left in the fields until being gathered-in (Plate 1).



Plate 1. A September cornfield in Nidderdale in the 1950s, with sheaves of wheat piled into stooks awaiting collection and delivery to the farm for threshing.

Photo: D.W.Swindells.

If wet weather prevailed, delaying their collection, the grain would have often sprouted on the stooks. Once gathered, they were taken to the farm and piled into large corn stacks on a bed of thorn branches which allowed air to pass underneath, then left until October or November. A large machine, which went from farm to farm, would be hired to thresh the sheaves and the grain taken into store. This lengthy procedure left an abundance of 'chaff' (husks and small grains - hence Chaffinch *Fringilla coelebs*), and also many weed seeds in the stackyard, which provided an abundance of autumn and winter food for the many sparrows, finches and buntings which assembled in large flocks. In the 2003 HDNS Bird Report, a local farmer wrote 'In the 1880s, my grandfather shot 87 Greenfinches with one shot. Imagine the scenario, a heap of weed seeds in the stackyard left over from a day's threshing, the muzzleloader pushed over the stable door - then bang! Grandmother filleting the breasts off with her thumbnail into a large bowl mixed with home-grown turnips, carrots and potatoes, a huge crust made from her own wheat flour, and there was a meal for a family of eight plus three farmhands and a kitchen maid or two, all for the price of a thimbleful of black powder and a handful of dust shot.' (Stobbs 2003).

The reaping machines started at the edges of the field and worked inwards leaving a decreasing island of corn in the middle into which a few Grey Partridges and Corncrakes would keep to cover and sometimes be killed by the blades. Many rabbits *Oryctolagus cuniculus* also sought

diminishing refuge where they would crouch as the noisy machine drew ever nearer, until finally bolting to be shot for the pot by waiting gunners. I nostalgically recall taking part in that atmospheric activity, with the smell of dusty newly cut corn, gun in hand and an anticipation of rabbit stew. The rows of discarded straw were burnt in the fields and the stubbles left over winter, providing another valuable food supply before being ploughed and sown in the early spring. The burning of straw in the fields was banned in 1993. Today, the whole process takes just a few hours; the large machines cutting and threshing in one operation and the grain being 'blown' into waiting wagons and taken to store. The straw is then collected and made into large circular bales, a common sight, and used for animal feed and bedding. The stubble fields are soon ploughed and re-sown, removing yet another important winter food supply.

Summaries of former abundance, declines and present status

The **Red Grouse** *Lagopus l. scotica* was once a far more numerous bird on the vast areas of managed heather moorland *Calluna vulgaris* and *Erica cinerea* in Upper Nidderdale (Plate 2) and over the watershed to the moors above Leighton Reservoir and Masham.

Plate 2. A view looking north along the Scar House Reservoir road in Upper Nidderdale, typical of the high ground in the north-west of the district, showing the dam wall and Little Whernside (610m. asl) with Great Whernside (690m. asl) in the distance.

Photo: JRM.



It was then, as now, the gamekeepers' remit to provide as many grouse as possible for the gunners to blast on the 'glorious twelfth', and to this end, every bird of prey was ruthlessly exterminated as some still are today. On 28th August 1872, on Blubberhouses Moor which adjoins the western edge of the district, Lord Walsingham shot 842 grouse in sixteen drives using a pair of breechloaders and a pair of muzzleloaders. On 30th August 1888, again on Blubberhouses Moor, he shot 1,070 in twenty drives expending 1,550 cartridges in the process, the exercise starting at 05.12 hours and lasting for 14 hours 18 minutes from the first to the last shot. In 1904, on the Marquis of Ripon's moors near Studley Royal, Lord de Grey personally killed 575 in one day as one of a party of seven guns (Nelson 1907). In more recent years, 300 brace were shot on the Swinton Estate on 30th August 1982 and during the first ten days of the shooting season in 1987 on Dallowgill Moor in Upper Nidderdale, 1,736 brace fell to the guns (Walker 1991).

During past winters with deep snow cover, now an increasingly rare event, large numbers assembled on areas of heather which had been kept clear by the wind. In the winter of 1895-96, heavy snow all over the Pennine moorlands was followed by a partial thaw with rain and then a freeze. The snow was frozen hard on top preventing the grouse from reaching the heather and on 21st January, immense packs left the moors, many being seen all over Lower Nidderdale and

around Harrogate, where scores fed in the stubble fields, on the leaves of root crops and on the buds of hawthorn *Crataegus monogyna* and blackthorn *Prunus spinosa* (*The Naturalist* 1895 p.62.). Today, there are some reasonable 'bags' but never any to match those of earlier years. Several factors are responsible for the mixed fortunes: recent infestations of the Heather Beetle *Lochmaea saturalis*, which feed on the buds of the heathers, robbing the grouse of their main food, inclement weather during the summer often leading to poor hatching success and also the loss of chicks through lack of insect food. In poor years, shooting is often curtailed to allow the stocks to recover. Relatively few are seen as one drives along the moorland roads, except in spring when the males are displaying and regularly perch on the roadside walls. Some counts of 30 to 60 are now being reported during winter months by those who walk the permissive paths across the moorland.

The **Grey Partridge** *Perdix perdix* was formerly a very common bird, distributed throughout the district from the low ground to the high moorlands. Some idea of its abundance is illustrated by the fact that on 23rd September 1884, Lord de Grey shot 303 near Ripon (Nelson 1907). Large coveys were seen regularly up to the 1980s, with an exceptional 101 gathered together at Spofforth Sewage Farm on 2nd February during the severe winter of 1962-63. Coveys of 30 to 40 were seen regularly during the 1970s and '80s, with 62 in eight small coveys in January 1979. From that time, there was a marked decline and the species became very scarce in the district. The loss of traditional hay meadows to planted rye grass and the consequent loss of much insect food for the chicks, did not bode well. Some small coveys were being reported during the 1990s which were likely supplemented by released, captive-bred birds which are not now routinely shot but have to compete with the thousands of released **Red-legged Partridges** *Alectoris rufa*. It is doubtful if there are any Grey Partridges of truly indigenous blood left in the U.K., most having an admixture of captive-bred birds, many coming originally from introduced foreign stock. Surveys by the BTO (British Trust for Ornithology, 2023), showed a national population decline of 85% by the end of the 20th Century and 92% by 2020, with a range contraction of 40%, the reason being directly linked to agricultural intensification.

The **Corncrake** *Crex crex* was referred to by Allis in 1844 when he said 'It is now seldom heard (in Yorkshire), incessant persecution by the bird stuffers and others having nearly exterminated them'. It was facing problems throughout the British Isles at that time; an early account, written in 1891 and relating to the southern part of the district under review, stated that 'the grass-cutting machines prove very destructive to the Land Rail (sic), not only are the eggs broken but both young and old birds are frequently caught by the knives' (Waite 1891). They were, at one time, distributed throughout the district, mostly in the agricultural areas, resorting chiefly to the meadows, clover and young corn. The ancient meadows along the valleys of the Rivers Nidd and Ure would have been ideal habitat. Nelson (1907), reported that it nested at 1,400 feet elevation in Nidderdale. In the 1940s, and living as now in Aspin Lane, Knaresborough, I occasionally heard their calls and flushed one in the adjacent fields, all of which are now built-over. Corncrakes featured in the Annual Reports of the HDNS every year from 1947 to '74, most records coming from the higher ground where the hay harvest was later and also in the meadows around Ripon and Knaresborough. Breeding was proved on only two occasions when a nest was robbed near Masham in 1947 and when young were successfully reared near Pateley Bridge in 1964. Since 1974, it has been reported on only three occasions: one calling near Ripon in June 1978, a late bird flushed by a shooter's dog near Knaresborough on 13th October 1984 and one calling at Sawley on 1st June 2017. The absence of true hay meadows

with abundant insects, such being replaced by monocultural grass for silage, has been a major reason for their decline.

Although **Lapwings** *Vanellus vanellus* can be very numerous when post-breeding assemblies and large flocks of immigrants gather at the major wetlands during the autumn and winter months, the breeding population has been virtually eliminated from the intensively farmed arable and pasture land on the low ground where, up to the middle of the 20th Century, breeding occurred commonly. Incubating birds and chicks could be seen on any area of rough pasture and between the rows of growing corn when farmers would mark the nests and avoid them when harrowing and rolling the fields. Today, the moorland edges on the higher ground with *Juncus* pasture, and also rough ground around some lakes and reservoirs remain their last refuge. Analysis of British breeding records by the BTO for the period 1967 to 2020 showed a population decline of 59% and a range contraction of 18%.

The **Common Sandpiper** *Actitis hypoleucos* was once a familiar summer visitor along the rivers, streams and lake margins on the high ground and, less commonly, beside the lowland waters and river banks where, up to the 1980s, many pairs could be found. Very common around Gouthwaite Reservoir in Upper Nidderdale, it was not unusual to see the adults standing on the roadside walls and occasionally on the road accompanying small chicks. Between 40 and 60 could be counted on the mud in late summer with 107, including several chicks, in June 1958. Very few, if any, breed there today and none at the lowland rivers and lakes.

The **Common Snipe** *Gallinago gallinago* was formerly much more numerous than it is today, large numbers being reported from several places during the autumn. Extensive areas of mud at the northern end of Gouthwaite Reservoir (Plate 3) regularly attracted up to 100 which could be seen feeding in the open, with 200 there in September 1970.

Plate 3. The northern end of Gouthwaite Reservoir in Upper Nidderdale showing the Sand Martin wall. The bright green area was formerly bare mud, where many Common Snipe could be seen feeding in the open.

Photo: JRM.



Spofforth Sewage Farm had 190 in September 1959 with 150 in September 1983 and 240 were at Hampsthwaite Sewage Farm in September 1973. Since the 1980s, counts have rarely exceeded 50 to 75, usually many fewer and mainly around the major wetlands. An exception was in January 1990 when 140 were flushed from a waterlogged stubble field near Harrogate, with 200 there in early February, those numbers never having been repeated. In the HDNS Bird Report for 2020, counts of 17 in January and 22 in September were described as being

'significant', giving some idea of the decline. As a breeding bird it is now much scarcer than it was up to the end of the Century and is only thinly distributed, favouring the damp, rough ground adjacent to the heather moorland. A search of known breeding areas around Pateley Bridge in Upper Nidderdale in 1999 revealed not a single Common Snipe and very few pairs nest in the general area today. Drainage and 'improvement' of pasture have undoubtedly removed much of the former breeding habitat.

The **Turtle Dove** *Streptopelia turtur* was formerly well distributed over much of the district except on the high ground. It nested fairly commonly in mature hedgerows and open scrubland and could be seen feeding on dry rough land, particularly around gravel pits, where weed seeds were prolific on disturbed ground. During the 1960s, '70s and early '80s, there were regular counts of between ten and 40 at low ground sites but, during the latter part of the Century, there was a dramatic reduction in numbers. Surveys by the BTO showed a national population decline of 71% up to the year 2000 and 99% by 2020. This enigmatic dove is now rare in the district and few records are received, none at all in most recent years. It is possible that the Turtle Dove will be lost as a breeding species in the British Isles.

The **Cuckoo** *Cuculus canorus*, once a very familiar summer visitor throughout the district from the lowlands to the moors, has suffered a marked decline. Although maintaining a presence, it is now only thinly distributed and absent from many areas, its familiar call no longer being guaranteed. The decline is national, particularly in the south of England and surveys by the BTO showed a 34% reduction in the breeding population between 1995 and 2020.

A survey of breeding **Swifts** *Apus apus* by the HDNS in the Borough of Harrogate during the summers of 1978 and 1979 gave a breeding population of up to 690 pairs, the majority nesting in old, three-storey, stone built terrace houses. The older buildings in towns and villages, and the pre-war 'semis' in suburbia, all provided access to roof cavities wherein the nests were built. In 1948, one observer noted 'hundreds', perhaps 'thousands' passing south over Harrogate during the last ten days of August (Chislett 1952). During the period 1950 to 1990, numbers in the district could be spectacular. Cool weather during their arrival in May and early June forced many to feed low over large sheets of water, where up to 1,000 birds were a familiar sight with one record of 1,200 over a gravel pit near Knaresborough on 5th June 1985. At Knaresborough Ringing Station (KRS) in 1971, a southerly movement during the evenings of six days between 2nd and 16th August was counted from the observation tower giving a total of 1,425 birds, and smaller numbers passing on most evenings until 18th September (KRS Annual Report).

Young birds are on the wing by late July and were once a common sight as they flew screaming, when newly fledged, with the adults along suburban streets near their breeding colonies. Alas, no longer. The species is now in serious national decline and feeding gatherings with inclement weather during their arrival in spring, rarely exceed 200 to 300 birds. BTO surveys show that the British breeding population declined by 62% between 1995 and 2021. Today, new buildings provide no access for breeding, and housing developers are being encouraged to fit 'Swift bricks' as nesting sites. This may go some way to improving the situation but the problem is, I fear, more serious than the simple lack of nesting sites, many of those formerly occupied being still available but unused. Problems on their migration routes and winter quarters and, most importantly, the lack of insect food, must be a major factor.

The **Skylark** *Alauda arvensis* is described by Walker (1977) as a 'Common summer resident right up to the head of Nidderdale and also a conspicuous passage migrant, particularly during October with flocks wintering on the low ground and hard weather movements occurring annually after snowfalls'. It was also numerous over the watershed to Leighton Reservoir and along the eastern part of the district, their numbers during the 1940s to '80s being often impressive as the figures below will show. On 10th December 1949, when the Harrogate Stray was still under the plough following World War II, 150 Skylarks fed on the snow-covered site of a threshed corn stack. On 27th December 1962 during the very severe winter, 1,000 were on stubble at Staveley and on 7th January 1967, 300 were flushed from a field of uncut barley at Farnham Gravel Pit. In 1963, 500 flew west over KRS on 6th October and, on 25th January 1976 with deep snow cover, a remarkable 3,420 flew south-west there up to mid-day, with 250 over a nearby gravel pit on the same day. Between 200 and 300 were often involved in such weather movements during the 1970s and '80s and, during a very severe cold spell in 1984, 960 flew south over KRS on 15th January. Cold weather movements up to the end of the year 2000 rarely exceeded 150 and the numbers frequenting the diminishing autumn stubbles have been many fewer, flocks of 20 to 60 being usual. Recent migration watches during September and early October have shown that some move south through the district but never in numbers approaching those of earlier years. The 'improvement' of pasture, the use of fertilisers and early cutting for silage have accelerated the species decline during the breeding season. Small numbers continue to breed on the moorland fringes and in the crops and meadows in the eastern and southern parts of the district, with a few around the reservoirs and wetland reserves. Surveys by the BTO showed a national population decline of 55% during the last quarter of the 20th Century and a further 15% by 2020.

The **Sand Martin** *Riparia riparia* has undergone a reduction in numbers during recent years, although still maintaining a relatively healthy and stable population. During the 1950s, I embarked on an intensive programme of ringing them at colonies at Lingerfield and Farnham Gravel Pits and in the banks of the River Nidd at KRS, Little Ribston, Tockwith and Cowthorpe catching 1,301 during July 1958 (*The Naturalist* 1958 pp.37-38). It was less numerous during the 1970s, due to a severe drought in the Sahel region of North Africa through which they pass on migration, resulting in a 75% reduction in the British breeding population by 1968 and '69 (BTO surveys). Although numbers were well down and some traditional colonies deserted, there were however, some fairly large ones. A survey of the River Ure between West Tanfield and Ripon north bridge in 1976, revealed 16 colonies of varying size totalling 424 holes. In recent years, the largest colonies along this stretch of the river have been one of 200 pairs in 1994 and one of 120 in 1999. In addition to the River Ure colonies, there was one of 260 holes at Masham Gravel Pit which became well established, having 300 holes in 1972, 420 in 1982 and 383 in 1987. Farnham Gravel Pit was a regular breeding site during its working period in the 1950s to '70s, a colony of around 190 pairs existing up to 1977.

During the second half of the 20th Century, the number of Sand Martins visiting or passing through the district in spring was much higher than they are today. If cool damp weather coincided with a major influx forcing them to feed low over water, there were some large assemblies often reaching 500 to 1,000 and sometimes more, 1,300 being at Hay-a-Park Gravel Pit near Knaresborough on 18th April 1995 and 1,700 at Nosterfield Nature Reserve on 22nd April in the same year. Some large numbers congregated in late summer when juveniles were on the wing, the largest numbers being 1,500 at Hay-a-Park Gravel Pit on 23rd July 1978 and at

Farnham Gravel Pit where up to 800, including many juveniles occurred almost daily, mostly congregated around the breeding wall from 14th July to 10th August 1979. In recent years, numbers anywhere in the district have rarely exceeded 200 to 300, with just one record of 500 in June 2020.

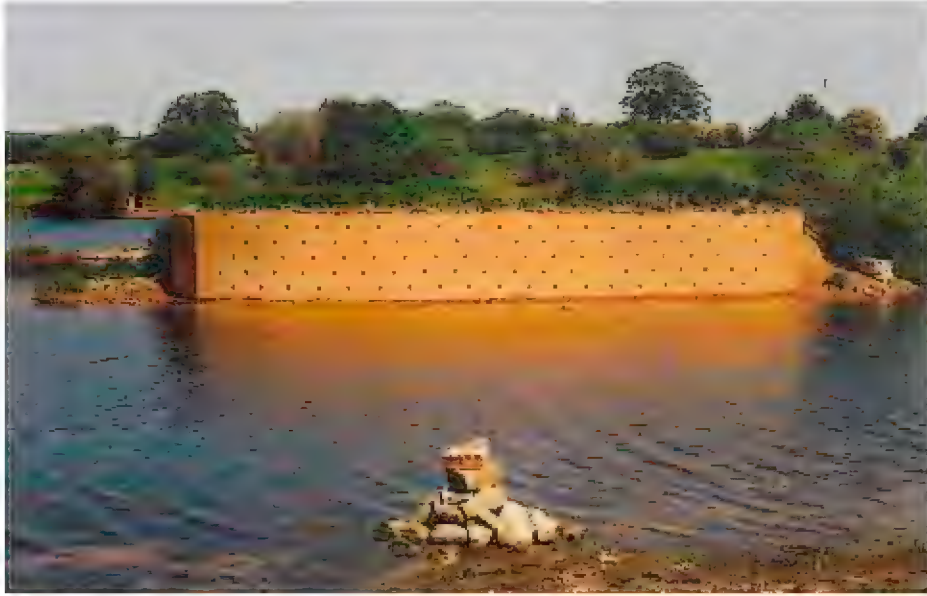


Plate 4. The Sand Martin wall at Farnham Gravel Pit South Lake. The most successful of the four such walls in the district, with all 79 holes occupied in 2007 and up to 50 or 60 annually.

Photo: Pat Clegg.

The provision of artificial nesting walls at Farnham Gravel Pit (Plate 4), Staveley Nature Reserve (2) and Gouthwaite Reservoir were soon utilised with varying success. The Farnham wall with 79 holes (see photo), has been the most successful with 22 pairs breeding in 1988, its first year, and 61 pairs in 1999. The number of occupied holes between 2001 and 2020 has ranged between 50 and a full house in 2007, most of which reared two broods. The Staveley walls, the first being constructed in 1997, were initially successful, but neither are in use today. The wall at Gouthwaite Reservoir has had up to 30 pairs during recent years.

Swallows *Hirundo rustica* and **House Martins** *Delichon urbicum* are now noticeably less numerous in the district doubtless due, as for several other summer visitors, to changing conditions along their migration routes and the loss of much of their insect food.

The **Willow Warbler** *Phylloscopus trochilus* used to be one of the most familiar songsters following its arrival in spring and was distributed throughout the district from the low ground to the margins of the high moorland. Some idea of its former abundance can be gained from the counts of singing birds in April; 24 at Gouthwaite Reservoir in 1984, 30 at High Batts Nature Reserve near Ripon in 1984 and 1993 and 20 at Scar House Reservoir in Upper Nidderdale in 1992. Large numbers passed through KRS during periods of post-juvenile dispersal from late July through August during the 1960s to 1980s when very many were intercepted, 400 being caught and ringed in 1976 and 230 in 1980, the passage in that year peaking on 9th and 10th August when a total of 60 was caught. Today, with the same trapping effort, the number caught would be very few. On 10th July 1978, a gathering of 80, which included many juveniles, was in the dead branches of a small tree near Ripon and during the annual passage periods up to the 1980s, birds could often be seen moving through suburban gardens. The numbers of singing birds published in the HDNS Bird Reports are now many fewer, with passage birds in the late summer rarely exceeding 20. The Report for 2019 stated that 'a distinct passage occurred during the autumn . . . ten were at Nosterfield Nature Reserve on 4th August and 12 at Staveley Nature Reserve on 20th August' - a sobering comparison with former times. Other species of woodland warblers are also in decline.

The **Song Thrush** *Turdus philomelos* was certainly more numerous throughout the district up to the 1970s and '80s being a regular summer resident and a familiar bird in suburban gardens. There were some large gatherings during the late summer and early autumn, the former breeding population being graphically illustrated by a count of 60, mostly juveniles feeding on slugs among mossy stones on the filter beds at Knaresborough Sewage Farm on 18th July 1977 and 40 doing so at Harrogate Sewage Farm on 11th August in the same year. During the years following, there was a serious decline and these concentrations no longer occur, the number of breeding birds reported each year being very few. BTO surveys have shown a 49% decline in the British breeding population from the late 20th Century to 2020.

The **Spotted Flycatcher** *Muscicapa striata* was a very familiar summer visitor throughout the district, nesting in mature suburban gardens, woodland edges and around farms where it took advantage of the then abundant insects, family parties and small post-breeding assemblies being a regular sight. BTO surveys showed a decline in the national breeding population of 61% between the years 1995 to 2014 and 92% by 2020, with a range contraction of 10%. Since then, the numbers in the district have been noticeably fewer, reports coming from several places but usually of only single birds and breeding reported from very few sites, the species being absent from many former breeding areas during the summer.

The humble **House Sparrow** *Passer domesticus*, once a very familiar bird throughout the district, was common in suburban gardens, breeding in every available niche and assembling in huge flocks during the autumn when immense numbers could be seen on roadside hedgerows as they flew up from the stubble fields. A roost in hawthorns at KRS during September and October of the years 1960 and '61 held very many, a total of 6,000 being caught in mist nets and ringed during those two periods. A mixed flock of House and **Tree Sparrows** *P. montanus* (now in serious decline since the 1970s), which gathered to feed on a waterlogged field of uncut barley at Farnham Gravel Pit during the winter of 1966-67, totalled around 2,000 birds. At KRS in August 1973, 600 fed in a field of ripening barley.



Plate 5. Two of the five large traps in operation at Knaresborough Ringing Station during the period 1952 to 1989. Birds were attracted to seed and bread bait at the large open front, then flushed and driven towards the narrowing end into the catching box. Many thousands of birds mainly sparrows and finches were caught and ringed and also, during the long hard winter of 1962-63, 7,000 Starlings *Sturnus vulgaris* were caught in the trap (left) above.

Photos: Ann Mettam.

The large traps at KRS (Plate 5, p197) baited with wheat, waste seed and bread, attracted many House Sparrows including lots of juveniles and, during the late summer and autumn of the years 1965 to '69, 6,586 were ringed, the annual totals being 1,589, 881, 1,918, 1,038 and 1,160. On 8th August 1976, 500 were netted as they fed on weed seeds with Greenfinches. A marked reduction in numbers became evident from the early 1980s, the flock sizes at KRS not exceeding 40. The decline continued and the HDNS Bird Reports for the years 1980 to '90 could list only two flocks in excess of 50, both of 100 birds on stubble near Ripon in August 1994 and in September and October 1997. Flock sizes reported during the decade to 2021 have ranged from 60 to 90, with one of 100 in a wheat field in 2019. Surveys by the BTO between the years 1994 and 1999 showed a reduction in the British breeding population of 46%. Small numbers continue to visit feeders in suburbia and a few flocks, rarely in excess of 100, still gather around farms but the species suffers from the absence of food once available in quantity in association with the harvests in past years (see Introduction).

The **Yellow Wagtail** *Motacilia flava* was once a very numerous breeding bird throughout the whole of the district, in very contrasting habitats, ranging from the stone walls of the sheep pastures on the high ground in Upper Nidderdale and around Leighton Reservoir to the low ground along the River Ure in the Masham area, and at the edges of the meadows, cornfields and root crops along the river systems on the eastern and southern boundaries, but none can be found on the high ground today. During the spring migration in the 1950s, '60s and '70s, there were many large assemblies regularly numbering 30 to 50 and sometimes more, at reservoirs, gravel pits and, particularly, sewage farms, where many gathered to feed on the abundant insects. In 1957, a year of spectacular migration, 81 were at the small sewage farm at Aldborough near Boroughbridge on 24th April and adverse weather on 29th halted birds on their journeys, when 125 were at Harrogate Sewage Farm and 100 were assembled on the mud at Gouthwaite Reservoir on 3rd May, with 150 on 11th. That number was present again on 4th May 1958. Birds continued to pass through the district in fair numbers during the spring up to the 1970s, with a marked movement at Spofforth Sewage Farm in 1979, the maxima being 70 on 30th April, 80 on 1st and 2nd May, with 70 on 7th May, 80% of which were males, very few of which likely being protandrous and still on passage. A BTO survey in 1980 showed a national decline of 81% since 1975, the cause of which was not fully understood but probably due in part to changing conditions along their migration routes and winter quarters in Africa coupled with the loss of insect food. The decline was becoming very evident in the district, counts of birds on passage being only around 25, a situation which continued until the end of the 1990s before undergoing further declines, some recent years having no significant numbers in spring with only single figures being reported (Mather, 2010). Numbers in the autumn during the 1950s and '60s were often very high at the time of post-juvenile dispersal and the arrival of returning passage migrants. A roost in the reeds at the northern end of Gouthwaite Reservoir during August in the late 1950s and early 1960s held up to 300 birds nightly, many of which were caught and ringed. The adjacent areas of mud regularly attracted 20 to 30 feeding birds during late July and August into the late 1980s. A roost near Hampsthwaite in August 1963 held up to 200 birds. After that time, numbers in the district were many fewer, with only between ten and 20 being seen at the regularly watched sites to the end of the Century. Since then, the annual counts have exceeded 15 in only seven years to the present time, maxima being between 20 and 30. Since 2001, the proven breeding population in the district has exceeded six pairs on only one occasion (nine) and none at all in 2014 and 2015. Further surveys by the BTO showed a 29% reduction in the national breeding population between 1994 and 1999

and a further 43% drop by 2012. The serious decline of this attractive wagtail in the district is now very obvious, particularly to those who were acquainted with its abundance during those earlier times. The numbers of **Pied Wagtails** *M. alba* passing through the district in spring and autumn are also many fewer, and the breeding population well down.

Plate 6. Farnham Gravel Pit in 1995, one of several such wetlands in the district, showing the hide built on a high bank overlooking the South Lake. *Photo: Ann Mettam.*



The **Greenfinch** *Chloris chloris* was a more numerous and widespread species during earlier years, up to the latter part of the 20th Century. Walker (1977) described it as a 'very common resident, breeding throughout the district with flocks of up to 250 being regular in cold weather'. The following figures give some idea of its former abundance. In the winter of 1967-68, a field of uncut barley at Farnham Gravel Pit attracted many species including sparrows and finches with 500 Greenfinches on 7th January and 1,000 on 15th. Feeding flocks of 200 to 400 were reported at several places up to the early 1990s. Several roosts were established during this period, the largest being in Allerton Park, where up to 300 attended during the winters of 1978, '79 and '80, with 1,000 in March 1981. By the end of the Century, much of their autumn feeding habitat had been removed with the disappearance of stubble fields and the loss of weed-covered ground around gravel pits, when their numbers became fewer. An outbreak of avian canker (*Trichomonosis*) in the early 2000s accelerated the decline. The large autumn feeding flocks are now gone and rarely exceed 50 except at a bird seed crop near Bishop Monkton which has attracted up to 100 in several recent years. There are now several fields of this important food source in the district, which farmers are paid to provide, benefiting many species of finches and buntings. Most finches are now fewer than formerly except for the **Goldfinch** *Carduelis carduelis*, the populations of which are holding their own and are now seen regularly at garden feeders and along country roads.

The **Yellowhammer** *Emberiza citrinella* has certainly suffered from intensive agricultural practices. Although some reasonably sized autumn and winter flocks are reported in most recent years, they rarely exceed 50 except at the bird seed crop at Bishop Monkton where up to 100 have gathered. It often visited garden feeders during the winter months, but no longer. The breeding population, however, is very much reduced and this once very familiar hedgerow songster is rarely seen or heard in the district during the summer. The scarcity is in line with a national breeding population decline of 62% between the years 1967 and 2020 (BTO Surveys).

The **Corn Bunting** *Emberiza calandra* was once a much more common resident, largely confined to the agricultural land about the eastern and southern parts of the district. During the autumn and winter months, up to the 1980s, some flocks ranging from 20 to 60 birds frequented the stubble fields. Today, such flocks are very few except for an occasional small gathering at the bird seed crops. There was a serious reduction in the national breeding population during the latter part of the 20th Century, resulting in a decline of 83% and a range contraction of 56%. Breeding records in the district are now very scarce and very few singing birds are reported from their former range.

The Wider Picture

Around 75% of the global land surface has been significantly altered by human activities. Pressures on the environment, many and varied, will inevitably increase as more and more land is cleared for food production, the demand for palm oil and for indulgent luxuries to supply the ever spiralling human population. This, resulting in a staggering 94 million hectares of forest being lost world-wide up to the 1990s, is just one of the many human impacts which are part of an inexorable biological meltdown. It is a worrying fact that for each one of us who is concerned about the world's environment, there are many millions who are simply not aware of the problems or who just do not care, and the very many who, faced with varying demographic difficulties, are unable to consider anything other than their own survival. In spite of all the important conservation initiatives and the creation of National Parks and reserves throughout the world, the percentage of such land is regrettably very small and, in some cases, tenuous. Nearer to home, 97% of Britain's wild flower meadows have been lost since 1945 and only 2.5% of our ancient woodlands remain. It is unlikely that the declines of many species of birds will ever be successfully reversed. The problem, which cannot be overstated, has resulted in the loss of 38 million birds from the British population.

Colonisation and Re-introductions

In stark contrast to the ailing fortunes of many birds, just a few of which are illustrated in the above summaries, there are some exotic species which, doubtless due to global warming, are spreading north into the wetlands of Britain. The remarkable colonisation by southern herons (number of breeding pairs in 2020 shown) include **Cattle Egret** *Bubulcus ibis* (8 pairs), **Little Egret** *Egretta garzetta* (2,188 pairs), **Great White Egret** *Ardea alba* (18 pairs) and **Eurasian Spoonbill** *Platalea leucorodia* (32 pairs), with **Night Heron** *Nycticorax nycticorax*, **Purple Heron** *A. purpurea* and **Glossy Ibis** *Plegadis falcinellus*, all knocking at the door, and also the arrival and spread of **Avocets** *Recurvirostra avocetta* (2,138 pairs) and **Black-winged Stilts** *Himantopus himantopus* establishing a presence. All this and the successful re-introduction of **Common Cranes** *Grus grus* after an absence of 400 years, resulting in a breeding population of 44 pairs at 25 sites up to the year 2020, and 71 pairs by 2022, and also **Red Kites** *Milvus milvus* and **White-tailed Eagles** *Haliaeetus albicilla*, may be exciting for many, especially the photographers, but little compensation for the loss of millions of woodland, farmland and garden birds.

And finally, a thought for the 'twitchers' - A rare bird is usually nothing more than a common one in the wrong place!

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Further back in time: new discoveries of a specimen of *Procerites* sp. and an unusual example of the Lower Bathonian ammonite *Parkinsonia (Gonolkites) convergens* (S. Buckman, 1925) at Huntsman Quarry, Naunton, Gloucestershire.

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Introduction

During the preparatory work for KJP's recent paper in this journal on a specimen of *Procerites (Gracilisphinctes) mirabilis* from Huntsman Quarry, Naunton (Phipps, 2022) discussions with the staff at the site revealed that two new ammonites had been collected. Despite numerous attempts to persuade the quarry owners to donate the fossils to a recognized museum, the ammonites remain unregistered specimens. However, the staff have provided numerous photographs and answered queries regarding the specimens and the rock succession at the site. Although access to the quarry has been denied, a visit from Professor D. J. Siveter (formerly Oxford University Museum of Natural History) to photograph the ammonites in

order to produce the figures for this paper was permitted. The resulting photographs revealed that one of the specimens was atypical in terms of morphology for its assumed stratigraphical horizon and so Dr R. B. Chandler agreed that this joint paper should be produced.

Details of the site

Huntsman Quarry, a Site of Special Scientific Interest (SSSI), has been famous for many years for its rocks and fossils of the Progracilis Zone of the Middle Bathonian Substage (Middle Jurassic) (see Sumbler, 2002, pp. 194-196 and Phipps, *op. cit.* for further details and references). More recently, permission was granted in 2006 to deepen the quarry by 12m to extract four metres of Fuller’s Earth Clay (Middle Bathonian) and eight metres of Lower Bathonian Chipping Norton Limestone (Gloucestershire County Council, 2006). Further permission was granted in 2021 for a southern extension to the quarry and these excavations have revealed a sequence of strata stretching from the White Limestone Formation of the Great Oolite Group down to the Clypeus Grit Member, Salperton Limestone Formation of the Inferior Oolite Group (Gloucestershire County Council, 2021; P. Joynes, pers. comm., 2022). As a result of these recent quarrying activities, the site now exposes rocks dating from the Middle and Lower Bathonian substages. In terms of radiometric age, these rocks are between 164.4 and 169.2 Ma (million years) old (figures quoted by Cox, 2002, p. 3).

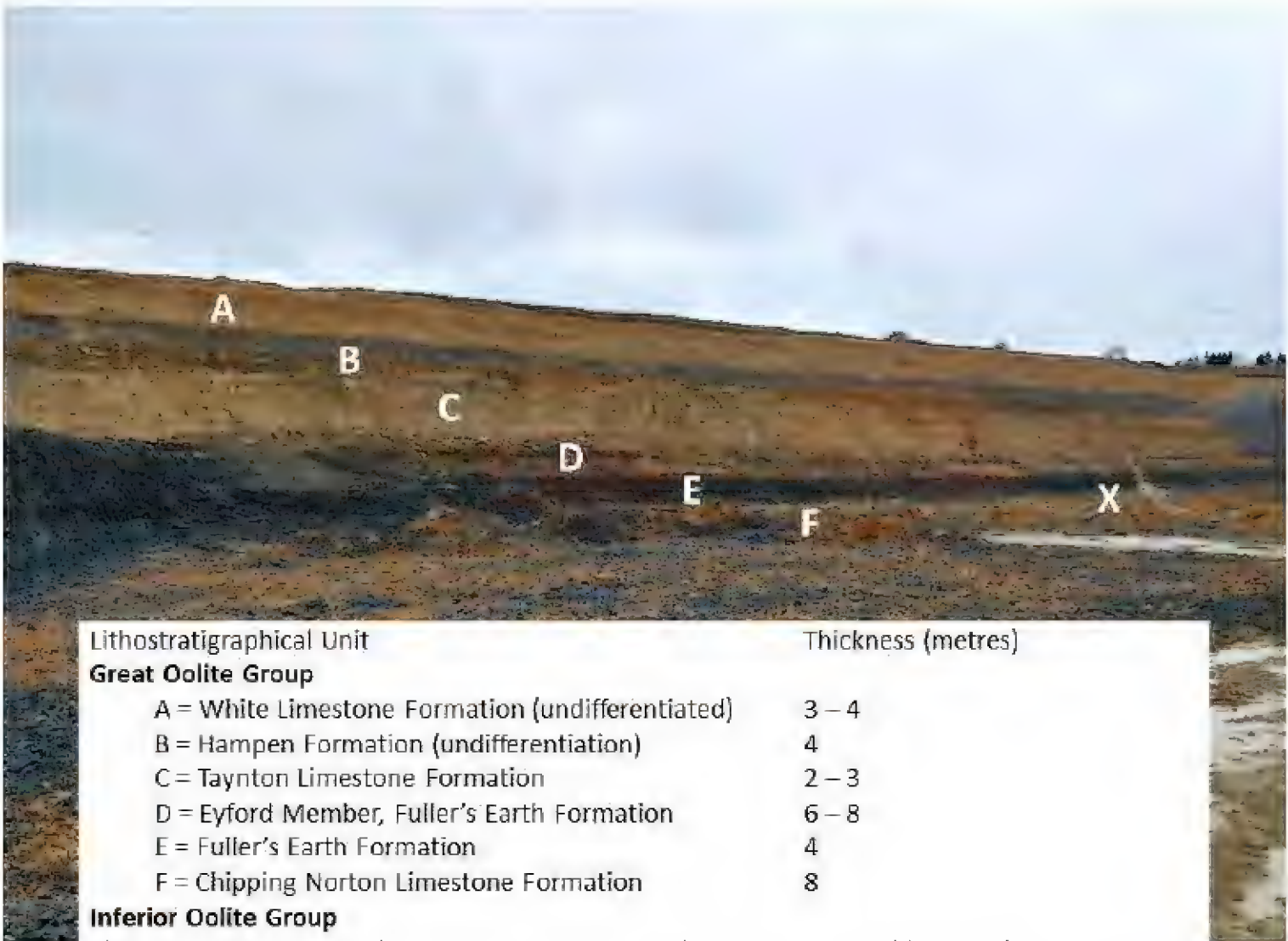


Figure 1. View of the southern face of Huntsman’s Quarry, Naunton, Gloucestershire labelled with details of the lithostratigraphical units present and the level (marked X, although not exact location) from which the specimen of *Parkinsonia (Gonolkites) convergens* (S. Buckman, 1925) (Specimen number HQN 2) was collected. Photograph and information coutesy of Mr P. Joynes, 2022. Modified by K Phipps.

Although it has not been possible to visit the quarry in order to produce a detailed description of the succession, the Quarry Manager provided a photograph of the southern face (Fig.) 1. Following examination of the relevant literature (Horton *et al.*, 1987, pp. 65-74; Sumbler *et al.*, 2000, pp. 53-66 and Barron *et al.*, 2002, pp. 21-23.) and discussions with the former British Geological Survey stratigraphers Mr A. J. M. Barron and Dr M. G. Sumbler, this photograph was labelled using formal stratigraphical nomenclature rather than the local and informal terms used by the quarry staff. The results of this work are shown as Figure 1. Full details of the characteristics of the formations mentioned on the photograph are provided by Palmer (1979, pp. 202-211), Sumbler (1984, pp. 51-60); Sumbler and Barron (1996); Sumbler and Williamson (1999) and Barron *et al.* (2012, pp. 49-51; pp. 67-77).

Details of the specimens

Although the ammonites have not been registered in a recognized repository, the staff at the quarry have agreed to affix identification numbers to both specimens and these are used in this paper.

Specimen HQN 1

This specimen, (shown in Figure 2), is of unknown provenance. It had been collected by the late owner of the site at some time before 2014 when the quarry was purchased by the current operating company. However, as permission to deepen the excavation was not granted until 2006, it seems likely that this specimen originated in rocks of Middle Bathonian age. The surrounding matrix appears to be typical of the Eyford Member of the Fuller's Earth Formation (Progracilis Zone): this view was supported by Dr M. G. Sumbler (pers. comm., 2022). Identification of this ammonite is hampered by a lack of diagnostic features: characteristic suture lines cannot be seen, the ribbing appears to have been subjected to weathering, there is no clear view of the ventral profile and it is obscured by the surrounding matrix. Having examined a range of photographs provided by the quarry staff and obtained the opinions of experienced Bathonian ammonite specialists (G. Pavia, pers. comm., 2022; M. Zatoń, pers. comm., 2022 and C. Pellant, (pers. comm., 2023), it is thought that this ammonite is a species of *Procerites*.



Figure 2. *Procerites* sp. thought to have been collected from the Eyford Member of the Fuller's Earth Formation at Huntsman Quarry, Naunton, Gloucestershire; Progracilis Zone. Lateral view.

Specimen number HQN 1. Photograph courtesy of Professor D. J. Siveter; prepared for publication by Dr A. S. Smith. Scale shown in centimetres.



Figure 3. *Specimen HQN 2. Parkinsonia (Gonolkites) convergens* (S. Buckman, 1925) collected from the Chipping Norton Limestone Formation at Huntsman Quarry Naunton, Gloucestershire: Zigzag Zone, Convergents Subzone. A: lateral view; B: ventral view; C: detail of suture lines. Specimen Number: HQN 2. Photograph courtesy of Professor D.J. Siveter; prepared for publication by Dr.A.S. Smith. Scale shown in centimetres.

Fortunately, details of the origin of this specimen (Figure 3) are known. It was collected on 3rd. March, 2020 by the Quarry Manager from “the Chipping Norton Limestone Formation immediately below the ‘Fuller’s Earth clay’” (P. Joynes, pers. comm., 2022) (see Figure 1, p202). It was seen as freshly quarried rock was about to be crushed as part of a trial of a new piece of quarry equipment. The specimen was prepared for display purposes by a company employed by the quarry operators and then returned to the site. Although recognized as a specimen of the Lower Bathonian morphospecies *Parkinsonia (Gonolkites) convergens* (S. Buckman, 1925), as described and figured by Arkell (1956, Part 6, pp. 153-156; text-figure 57; plate XVIII, figs 2 and 8; plate XIX, figs 1 and 2.), HQN 2 displays some atypical features. Its ventral view shows a more compressed whorl-section than typical specimens of *P. convergens* and resembles some group members placed in *Parkinsonia* from France and Germany described by Nicolesco (1928, pp. 54-61) and Wetzel (1950, pp. 69-75) as *Parkinsonia compressa*. The specimen was brought to the attention of Dr R. B. Chandler and he agreed to provide the following systematic description of the specimen:

Superfamily Perisphinctoidea Steinmann, 1890

Family Perisphinctidae Steinmann, 1890

Subfamily Parkinsoniinae Buckman, 1920

Type species **Ammonites parkinsoni* J. Sowerby, 1821

Parkinsonia (Gonolkites) convergens (S. Buckman, 1925)

Holotype as *Gonolkites convergens* Buckman in *Type Ammonites*, Volume V, Part L, plate DXLVI, figs A and B.

Full systematic analysis and synonymy are rejected here on the basis of brevity as the description relates to only one specimen.

The specimen is a fully septate phragmocone with an approximate diameter of 140mm at the last preserved septum. From its side view it is a close match to Buckman’s type displaying similar involuteness. On the dorsal flanks the outer whorls present display absent or feeble primary ribbing. The innermost four or five whorls have strong primary ribs, some with small pinched nodes as coiling progresses. At larger diameters there is regular prosiphonate ribbing on the ventral flanks. The ventral aspect of the phragmocone is convergent and the venter gently rounded with the ribbing extending to mid-venter dividing the opposing flank by a plain medio-ventral band. The opposing half of the ammonite remains embedded in rock.

The specimen does not appear to be crushed and from a ventral view is considerably more compressed in comparison to Buckman’s type which is stouter, more strongly ornamented and broader at the dorsal aspect. There is a depressed furrow along the mid-venter. Notably, specimen HQN 2 is considerably larger than the available examples of *Parkinsonia (Gonolkites) convergens* in museum and private collections. Once again, it has not been possible to examine the specimen physically.

Significance of Specimen HQN 2

As noted by Page (1996, p.45), Bathonian ammonites are generally rare in Britain in areas to the north of Dorset and Somerset. In parts of Dorset they are extremely common in the Zigzag Zone, but this is in a highly condensed homogenous stratum known as the Zigzag Bed and the extent to which detailed stratigraphical subdivision is possible is limited (Dietze and Chandler, 1998). The paucity of ammonites appears to be especially true in the Cotswold Limestone

Formation of the Cotswold Hills. The Chipping Norton memoir of the British Geological Survey states that “The Chipping Norton Limestone rarely yields well-preserved macrofossils, and few of these are diagnostic of age.” and that “Few ammonites have been recorded from the district (Horton *et al.*, 1987, p. 67). According to Sumbler *et al.* (2000, pp. 53-56) in the memoir for Cirencester, “Ammonites are even rarer in the Great Oolite than in the Inferior Oolite Group” and, as stated by Sumbler in his earlier work (1995, pp. 9-10), those that were discovered during British Geological Survey mapping were derived from field brash. In addition, the positioning of the standard zonal boundaries is described as “highly uncertain” (Sumbler *et al.* 2000, *op. cit.*, p. 53).

Barron *et al.* (2002, p. 22) reported that the few ammonites that have been recorded came from New Park Quarry [SP 175282] and “are consistent with the Zigzag Zone”. The ammonites from this quarry at Longborough near Stow-on-the-Wold, together with those from Chipping Norton Workhouse Quarry [SP 319276] were described by Arkell (1947, p. 32) and Arkell and Donovan (1952, p. 249) and summarized by Arkell in his monograph (1958, Part 8, pp. 242-243). Their biostratigraphical significance was considered by Torrens in his comprehensive and authoritative accounts (1969, p. 75; 1980, p. 39). It is interesting to note that at both of these sites the ammonites came from the “Hook Norton Limestone” which is now considered to be an informal member of the Chipping Norton Limestone Formation (Barron *et al.*, 2012, p. 68). Although the majority of the ammonites found in the “Lower Hook Norton Member” belong to the Convergens Subzone of the Zigzag Zone, the discovery of *Zigzagiceras (Procerozigzag) pseudoprocerus* from this member may indicate the presence of the overlying Macrescens Subzone (Torrens, 1980, p. 39). In view of the obvious rarity of any ammonites in the Chipping Norton Limestone Formation, any new discoveries are important. The unusual form of specimen HQN 2 and the fact that it was found *in situ* makes this ammonite of especial significance.

Comparison of HQN 2 with specimens from the Zigzag Bed of the Beaminster-Broadwindsor area of Dorset is suggestive that the specimen could be from a horizon in Huntsman Quarry that is either from the top of the Convergens Subzone or higher. On the basis of a single *in situ* example any extrapolation is highly tenuous but the trend towards compression, greater size and an oxyconic morphology is suggestive of later morphospecies below the occurrence of *Oraniceras*, a group not yet proven in Britain. This would place the level of strata from which the Huntsman Quarry ammonite came as possibly Macrescens Subzone or above. Due to the considerable intraspecific variability in the morphology of ammonites, it is possible that the specimen came from a lower level within the Convergens Subzone. However, current fieldwork by RBC has shown a definite increase in the size of macroconch *Parkinsonia* in higher parts of the Zigzag Bed of Dorset, the precise age of which differs across the region. In conclusion, the Huntsman Quarry specimen and therefore the stratum from which it came are likely to be of highest Convergens Subzone age or possibly even Macrescens Subzone. A truly definitive answer can only be achieved by detailed bed-by-bed collecting at this important location.

A final comment

It should be remembered that these recent discoveries at Huntsman Quarry would not have been recorded if KJP ‘s late father had not called at the quarry on his way home from a business meeting in Gloucester in 1996 and asked “Any fossils?”. As a result, three papers on the subject have now appeared in this journal and this work forms the final part of that trilogy.

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This paper is dedicated to the memories of Mr A. J. Phipps (1931 – 2001) and Mrs P. I. Phipps (1934 – 2021).

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A survey of Water Voles in upland habitat of the Holme Valley, West Yorkshire

The project described in this article, undertaken by a 'Year in Industry' student working with River Holme Connections, was financed by a Yorkshire Naturalists' Union grant.

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Introduction

The Water Vole *Arvicola amphibius* became a wildlife enthusiasts' favourite through the character "Ratty" from *Wind in the Willows* by Kenneth Grahame and could often be seen along rivers, streams, and ponds across the country; however this is sadly no longer the case. Since the 1980s these little rodents have faced major declines in numbers, resulting in the loss of almost 94% of populations over a 30-year period, making them one of the "fastest declining mammals" in the UK (Titford, 2021). As a result, Water Voles are now protected as a Schedule 5 species under the Wildlife and Countryside Act 1981 and licenses must be applied for if undertaking any work that may require displacement or disturbance of the animals and their burrows (Natural England, 2022). This paper describes a project to assess habitat suitability for Water Voles and to look for evidence of their presence following a soft release in upland habitat of the Holme Valley.

Water Vole ecology

Water voles are a native species that colonised Britain almost 10,000 years ago and have since populated both aquatic and terrestrial habitat within the UK (Water Vole, 2023). There are two recognised main populations within the UK that are genetically distinct, those that descended from Iberia and settled in Scotland and then the rest that came from Southeast Europe and distributed themselves across England and Wales (Brace *et al.*, 2016). This is important to keep in mind when considering genetic diversity within reintroduction projects (McKeever, 2016).



Figure 1. Water Vole

Photo: Africa Gómez

Water Voles are known as ecosystem engineers and evidence shows that landscape scale heterogeneity increases with more Water Vole activity. The way that they burrow aerates the soil and soil samples indicate that this behaviour leads to changes in its makeup so that it can support a higher diversity of plant life. As well as this, their tenacity for “gardening” – grazing the grass outside their burrows to create “lawns” – limits the growing pressures created by dominant species, leaving space for less common species which then attract a more diverse array of wildlife (Bryce, 2006).

When Water Voles were common and widespread, they were often mistaken for rats; however they actually look quite different (Fig.1). Rather than a long skinny face and pink tail, Water Voles have much rounder features, are covered in fur and have large orange teeth that they use to carve out their burrows. They make a distinctive plop noise when entering the water to evade predators.

Although they are mainly herbivorous, feeding on an abundance of native vegetation from over 277 species (The Mammal Society, n.d.), a female Water Vole in need of some extra protein would have no issue feeding on freshwater shellfish and snails. This is normal behaviour during the breeding season when they are able to produce up to 5 litters of 5 – 8 individuals per year and need to eat double their body weight to remain healthy over this period. Populations usually boom over summer and can then decline by 70% over winter due to the loss of vegetation that acts as food and shelter from predators (Hollings, n.d.). This is usually when communities are at their most vulnerable from predation and starvation.

Because Water Voles are a keystone species, meaning many other species rely on their survival, from insects to larger mammals, it is important that we act to conserve them as soon as possible and reverse the dramatic loss that populations have faced (Cartmell, 2018).

Cause of the decline

Although agricultural intensification and habitat degradation have had a detrimental effect on many UK species, including the Water Vole, it was the introduction of American Mink *Neovision vison*, an invasive non-native species (INNS) (Pavid, 2020, RSPB, n.d.) to UK shores through fur farming that has had the biggest negative impact on the Water Vole (Rushton *et al.*, 2001). Mink are well known for being extremely versatile animals, producing litters of 6 – 10 young

during April and May, which then disperse up and downstream from August (Fraser *et al.* 2017). Unlike native predators, such as the Eurasian Otter *Lutra lutra*, female Mink are small enough to fit into burrows along tributaries within their territories, resulting in local extinctions of Water Vole colonies, especially during winter months when vole populations are at their lowest (McDonald *et al.*, 2007). In the UK, as evidenced by Harrington *et al.* (2020), American Mink numbers are recorded at around 110,000. However, with the expansion of Mink trapping projects, this number is in decline which will hopefully allow Water Voles time to establish viable populations all over the UK (Mammal Society, 2018). This hasn't always been feasible as it does require a lot of time to check traps daily and original Mink trapping projects didn't have the same effectiveness as modern initiatives because they relied on manual checks daily rather than the remote management used today (Martin, 2022).

In the East of England, the use of smart traps such as remote operated traps has proved useful in limiting staff time and cost spent on routinely checking them. The programme has also been successful in bringing Mink numbers down from around 5 – 10,000 to just 1000 over a few years which has given the local Water Vole population an opportunity to recover (Early, 2022). Water Vole adaptability has allowed them to cling on in areas not yet populated by American Mink and it is proven that if space is made for them, they will utilise it.

It is for these reasons that American Mink control is often the first stage of Water Vole conservation projects, and it is important that Mink control remains ongoing throughout any reintroductions to reduce predation in the early stages of establishment.

Water Voles in the Holme Valley

The Holme Valley is located in West Yorkshire, the River Holme flowing north through the valley from its source in the moorlands above Digley Reservoir (SE 10297 07064) to Huddersfield town where it then joins the River Colne. There are several tributaries that feed the river via Bilberry Reservoir and Digley Reservoir including Hey Clough, Reap Hill Clough, and Dean Clough. The moorland above the reservoirs where many historical Water Vole signs were recorded is made up of a patchwork of peat covered cloughs. The habitat itself consists of a mosaic of acidic grasses, sedge, and rush joined by ditches and wetland in Yorkshire moorland.

Local charity River Holme Connections has set up a small Mink trapping project along the main River Holme and some of its tributaries in order to control the local population. Beginning in Autumn 2022, 6 Remoti© monitored floating Mink rafts have been deployed, although no American Mink have been caught or dispatched in the last year, despite sightings being reported. Before these traps were set out a total of 1 American Mink was trapped and subsequently dispatched in 2021. The control programme is ongoing.

In addition to this, a total of 20 breeding Water Vole pairs were soft released (gradual acclimation to the new environment through cages dug into the ground, allowing Water Voles to tunnel out at their own leisure with added protection from predators) into a location along Black Sike Dike in June 2022. The initial release site was based on private land within the valley with Black Sike tributary running through it, 2300m in length, before reaching the main River Holme. Due to high concentrations of native predators within the release site it was important to establish if populations had successfully bred and dispersed, which was included within the planned surveys.

Survey Methodology

The surveys were undertaken within the Holme Valley in May/June 2023 in order to update historical field sign data recorded over 10 years ago and to use this information to inform potential future releases. The survey was centred around the peat habitat in the moorlands above Digley reservoir, as described above. Initially a desktop study was undertaken to determine potential optimal habitat and its connectivity between historical Water Vole datasets provided by West Yorkshire Ecology Services, with the earliest field sign recorded between 1997 – 1999 and the latest during 2009.



Figure 2. Water Vole habitat suitability transects (pink dotted line).

This information was used to pinpoint ideal areas of habitat whose suitability could be assessed along Reap Hill Clough, Dean Clough and Hey Clough which feed Bilberry reservoir (also surveyed) from the hills above (Fig. 2). These were scored from 1-8, based on preferred Water Vole habitat characteristics as defined by Harris *et al.* (2009) but which were slightly modified to fit the traits of upland habitat. The optimal habitat features sought, incorporating water, dry areas for nesting and vegetation, were:

- 90 – 100% well developed vegetation/ emergent vegetation cover
- Year-round food sources (shoots and roots over winter)
- Permanent water
- Suitable refuge areas above water level during extreme fluctuations in winter
- Suitable bank substrate for burrowing
- Ledge at water level for latrines/ ease of getting in/out
- Opportunities for nest building

The habitat suitability of the waterbodies was then mapped in a traffic light system on QGIS, red = poor, orange = good, green = optimal (Table 1).

Table 1. Habitat Scoring Categories (based on system proposed by Harris *et al.*, 2009)

Colour	Category	Score
Red	Poor habitat – unsuitable for Water Vole reintroduction, e.g., concrete banks	<3
Orange	Good habitat – potential to enhance habitat for Water Vole reintroduction	3 – 5
Green	Optimal habitat – opportunity to introduce Water Voles with minimal intervention	>5

Once the initial habitat surveying had been mapped, Water Vole field sign surveys (Table 2) were undertaken between May and June, focusing on the three cloughs (Hey, Dean and Reap Hill), Bilberry reservoir and the previous soft release site along Black Sike Dike.

Table 2: Water Vole Field Signs (based on Dean, 2021)

Water Vole Field Sign	Description
Droppings/Latrines	Small (8 – 15mm), tic tac-shaped pellets, usually green in colour, that have been flattened by scent glands to mark territory though they do not smell. They are normally in a prominent area, either next to the riverbank or within sedge/ grassy tussocks.
Nests	Rugby ball sized clumps of woven grass above water level, usually made in areas where water level fluctuates to avoid the flooding of burrows.
Burrows	Approximately fist sized holes in the side of banks; Water Voles also dig entrances underwater for more predator evasion options.
Feeding Remains	Water Voles spend a lot of time eating and leave piles of discarded plants chewed at a 45-degree angle at the end. They also leave the white inside of sedge called “pith” which sometimes stands out against all the green vegetation. Remains are usually found next to flattened areas of grass where the vole has been sitting to eat.
Footprints	Water Voles have star shaped feet with 5 toes on the hind foot and 4 on the fore foot although footprints aren’t the most reliable as they are almost indistinguishable from a rat.
Runs through vegetation	A larger small mammal will leave reasonable sized runs through vegetation which can be useful when paired with other field signs to show where Water Voles have been travelling. It’s not a definitive sign to rely on if it’s on its own.

The lengths of the four tributaries and section of reservoir made up a survey site of 7700m, all within the optimal habitat category. The survey area was then split into 500m transects with every other section surveyed up to 5m from the bank lip. The surveyor then inputted the location and labelled any field signs into a Garmin eTrex GPX to later upload into QGIS.

Results

Recorded data showed evidence of Water Voles still present in the upland habitat of the Holme Valley as of 2023 with specific field signs identified below in Table 3. Each field sign was found at a different location along the named tributary.

Table 3: Survey Results

Tributary	Field Sign(s) Found
Reap Hill Clough	Old burrow networks were found in 2 locations and freshly dug burrows found in 1, along with 3 new latrines and 1 pile of feeding remains.
Black Sike Dike	6 piles of feeding remains were found in separate locations along this site as well as 3 latrines and 1 freshly dug burrow.
Bilberry Reservoir	Feeding remains were found in 8 locations along this tributary as well as 1 fresh latrine and 3 burrows including a nest.
Hey Clough	A pile of feeding remains, and 1 latrine were found along this tributary.
Dean Clough	5 fresh latrines were found in separate locations along this tributary together with 2 burrows and 2 piles of fresh feeding remains.

Conclusion

There is evidence that Water Voles are still present along all of the surveyed tributaries indicating that populations have survived since the last surveys undertaken in 2009; however some of the field signs were fresher than others, though this could have been attributed to the summer heat. It is safe to assume that all signs were made within two months of the survey dates because heavy rainfall would have washed many of them away otherwise. Evidence is stronger at Dean Clough and Bilberry Reservoir which indicates either more active or larger Water Vole populations than found at Reap Hill Clough and Hey Clough. Fresh field signs at Black Sike Dike confirm that individuals from the soft release survived winter and successfully bred. It should be noted that surveys were not repeated, which may affect the quality of the data.

Overall, the surveys showed that Water Voles are still active in the uplands so looking into improving habitat connectivity and reducing American Mink presence may be beneficial. Ongoing field sign surveying is recommended as surveys were not repeated and there was a large gap in data between 2009 and 2023, so it would be advantageous to keep records up to date. Monitoring at the soft release site (along Black Sike Dike) should continue to inform further introductions and conservation strategies.

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ERRATA

In Wilson, R. (2023) Update on spider recording in Watsonian Yorkshire (2020 - 2022), *The Naturalist* 148: 136-146.

On p140 the first two sentences of the final paragraph should read:

‘James McGill’s discovery of two females from vacuum sampling wet acid Sphagnum bog on Fylingdales Moor (VC 62) within the North York Moors NP must rate as one of Yorkshire’s least known expected spiders; all the more remarkable because he was collecting in what must have been relatively uncomfortable conditions given the February 2022 date. James’ effort has extended the known national distribution of this rare spider north and east by approximately 140 km from its nearest English location at Kinder Scout in the High Peak (VC 57: Derbyshire), which dates back to May 1980.’

On p142 the last sentence of the penultimate paragraph should be:

‘For VC 63, *Sibianor aurocinctus* has been deleted from the list as on the balance of probability, the 2000 record from Hatfield Moors SSSI was likely *S. larae*.’

In Table 1 (p143): *Tegenaria ferruginea* was not new to VC 63 in 2022 and should be deleted.

In Table 2 (p143) ‘Additions in 2020 to 2022’ for the VC63 column should be 6, the ‘Total Species’ for VC63 should be 371 and for Yorkshire 433.

YNU Excursion Reports 2023

Hell Wath LNR Ripon (VC64) 27 May 2023

INTRODUCTION (Terry Whitaker)

The YNU VC64 meeting to Hell Wath LNR and adjacent areas in Ripon was blessed by warm dry sunny weather and was part attended by over thirty people including several local residents and Friends of Hell Wath. A smaller number stayed on for the reporting meeting in the community pavilion where self catering refreshments including home-made cakes, proved popular. No one expected any outstanding records from this rather challenged public access area but a few interesting observations were made.

The reporting meeting was chaired by the past YNU President, Prof. Alastair Fitter, assisted by Terry Whitaker, and 13 people from 9 affiliated societies shared their observations. Judith

Allinson [JA] who lived for many years in the area was unable to attend the visit on the day but visited the area two days beforehand and wrote:

“I walked from the Rustic Bridge at High Cleugh, at the junction of the Rivers Skell and Laver and followed the River Skell up to Hell Wath foot bridge. I remember seeing Himalayan Balsam beside this bridge as a child 60 years ago, admiring the flowers and flicking the fruit to see the seeds jump out. There was a natural Magnesian Limestone woodland ground flora. I remember the violets and primroses along the banks, below the scrub. Some of the hawthorn scrub is now very tall. I remember picnics and swimming/wading in the pool at the bend of the river at SE29947010 in the mid/late 1950s. The river bed here is now often covered with green algae. The trees are taller, sloe has extended into the grassland and the bank is rather worn (cattle trampling or just more shade from trees?) so it is much less conducive to paddling. The area is now enjoyed by far more people, often dog walking, as more houses have been built in the surrounding area.”

OTHER VERTEBRATES (Compiled by Terry Whitaker [TMW])

Few vertebrates were seen except for Grey Squirrel, and European Rabbit. Mole hills were widely present. A bat transect is run across the LNR.

LEPIDOPTERA (Jill Warwick & TMW)

Moths

The YNU Lepidoptera Group was invited to trap on the Friday night. Three Mercury Vapour (MV) traps were set up on the Friday night in three local gardens and two actinic traps were operated in secure areas on the LNR. 45 species of moths were recorded. In addition TMW and Alastair Fitter with the help of the owner Matthew Adamson, set up two generator driven MV traps in a private nature reserve woodland at nearby Paddy Wood (SE294711). This narrow ‘brown field site’ is a mature eutrophic mixed riparian woodland by the side of the lower River Laver with a great diversity of vegetation and a rich ground flora, much of it non-native. Here 37 species were recorded.

No particularly unusual species were recorded and relatively few microlepidoptera were recorded. However it was nice to see Sallow Kitten *Furcula furcula* in one of the garden traps.

Butterflies (TMW)

The warm sunny weather proved excellent for observing butterflies and 11 species of the 22 reported from the butterfly transect on the site were seen. In addition some of the same species were recorded in four adjacent 1km squares. The species present were Large White, Small White, Green-veined White, Orange Tip, Brimstone, Holly Blue, Peacock, Small Tortoiseshell, Comma, Red Admiral, Speckled Wood. The most common were Speckled Wood and Brimstone. For more information see: <https://www.yorkshirebutterflies.org.uk/recording/transect-reports/hell-wath>

COLEOPTERA (compiled by TMW)

The very few beetles reported were in moth traps. They were Common Cock Chafer or May Bug *Melolontha melolontha*, a burying beetle *Nicrophorus* sp. and *Malthodes minimus* a small but very distinctive soldier beetle caught in Paddy Wood. During a walk through the lanes of four 1km squares adjacent to the LNR, TMW and Terry Crawford noted that the profusely flowering

Cow Parsley was attracting very few insects and wondered if this was a result of intensive agricultural management in the adjacent fields.

HEMIPTERA, ODONATA & EPHEMEROPTERA (compiled by TMW)

The handsome Hawthorn Shieldbug *Acanthosoma haemorrhoidale* was seen. A pine scale insect was also recorded. Only a single Aeshnid dragonfly was noted although dense swarms of mayflies were present dancing above the pools of the River Skell.

HYMENOPTERA, Aculeata (TMW) and Parasitica (Bill Ely)

Few bees and wasps were around except for the honey bee *Apis mellifera* but the White-tailed Bumblebee *Bombus lucorum* was common. All parasitic hymenoptera from the light traps were forwarded to Bill Ely for identification.

MOLLUSCA (Terry Crawford)

I noted that the intersection of four 1 km grid squares occurred near to the southern entrance to the Reserve and decided to cover the main square for most of the Reserve (SE3070) and also to visit nearby areas of the other three squares. I made 23 records of species x 1 km square combination comprising 15 species in total (8 snails and 7 slugs) of which 12 species (6 snails and 6 slugs) were found on the Reserve. Molluscs were generally scarce and I felt that they probably had not yet recovered from the drought of the previous year. There was nothing of particular note except that I was pleased to find a fine example of Rusty False-keeled Slug *Arion fasciatus* on the Reserve, a personal favourite which is more widespread in the north compared with southern areas of England where it seems to be mainly synanthropic. The most frequently encountered species was Kentish Snail *Monacha cantiana*. It has been suggested that this snail was introduced to Britain by the Romans. Certainly its distribution is largely south-eastern, and in Yorkshire it is found mainly eastwards of the region of the A1 road. In grid square SE3069 I walked about 600 m along Whitcliffe Lane and in every one of the seven 100 m square grid references I easily found *M. cantiana* attached to the roadside vegetation. I wonder if it is spreading westwards in Yorkshire?

FLOWERING PLANTS (Wendy English [WE] & TMW)

Several members, especially WE, contributed to a list of about 120 higher plants. The highlights were *Carex muricata* (confirmed by Don Grant), European Spindle *Euonymus europaeus* (see p219) and Lesser Chickweed *Stellaria apetala* (syn. *S. pallida*). Another notable species was the continued presence of Sand Leek (*Allium scorodoprasm*) re-found by JA in a field (SE30026977) close to Whitcliffe Wood, where she first saw it c.30 years ago and it is still there. She also walked back through the fields and saw the patch where the conservation group have planted some strips in the grassland on the LNR with some native grassland species including Field Woodrush *Luzula campestris* which was doing well. JA also looked for the Yellow Star of Bethlehem *Gagea lutea* that used to grow in the gravel bed and on the bank just south of the Fairy Steps. She saw it 30 or 40 years ago but has not seen it in the last 20 years at least despite its still being listed as one of the rarer plants of the LNR.



Left: Spindle *Euonymus europaeus*.
Photo: Wendy English



Crossocerus dimidiatus (from the VC65 Excursion, see p 223). Photo: Terry Whitaker

Considering the history of the reserve, surprisingly few non-native plants were found (only three spp.), the most important being Indian Balsam *Impatiens glandulifera*, a long established invasive species, which is causing problems on the riparian parts of the site. However a removal programme is in progress.

PTERIDOPHYTES, FERNS (WE)

Only five common species were recorded: Hart's-tongue Fern, *Asplenium scolopendrium*, Scaly Male Fern, *Dryopteris affinis* agg., Broad Buckler-fern *Dryopteris dilatata*, Hard Shield-fern *Polystichum aculeatum* and Bracken *Pteridium aquilinum*.

LICHENS (JA)

Throughout the walk around the LNR the lichens on the trees all show the high level of nitrogen compounds in the air. The *Xanthoria parietina* and *Physcia tenella* and some *Physcia adscendens* is abundant. One tree has some *Graphis scripta*. At High Cleugh JA revisited some old wooden railings under the trees. Two years ago these were rich in lichens including two species of *Melanohalea* but these are lichens which can tolerate high nitrogen compounds. The walk was almost completely devoid of boulders or stone structures with lichens on them. (unlike typical walks around places in the Dales). The cement of the footbridge at Hell Wath supported a few. On return at High Cleugh I noticed the memorial plaque to a royal event about 50 or 70 years ago had some saxicolous lichens on it and this added to the lichen score.

PLANT GALLS

In contrast to the magnificent full flowering old hawthorn trees the sloe bushes looked distinctly 'scabby' with distortion of their terminal leaves and green aphid infestations. They also had several fungal galls of Pocket Plum *Taphrina pruni* which was producing distorted fruit.

MYCOLOGY

Only a very few common fungi were noted; they were *Puccinia urticata*, forming its normal yellow stem distortions on nettle, 'crampballs' or 'King Alfred's cakes' *Daldinia concentrica* on many of the abundant dead ash branches from trees dying from Ash dieback infections.

The strange white rust fungus *Epichloë* (probably *baconii*) was fairly common on the grass *Poa trivialis*. This ascomycete fungus forms an endophytic symbiosis with grasses. It is somewhat beneficial to the host, including the production of several herbivore-detering alkaloids, which increase stress resistance, and growth promotion but it can sometimes cause 'choke' a disease which sterilises the plant.

COMMENTS ON CONSERVATION

Extensive vegetation destruction on the LNR caused by excessive pedestrian traffic was noted, this makes the paths very wide and slippery and muddy in wet weather. It was also obvious that both the Rivers Laver and Skell were suffering from eutrophication due to diffuse pollution, probably from agricultural sources.

ACKNOWLEDGEMENTS & THANKS

The organiser (TMW) acknowledged the help given by Nabil Abbas, and Gabby Crisp of the National Trust, Skell Valley Project. Thanks were also given to the Friends of Hell Wath and local residents for helping with the moth trapping and allowing the group to use the Sports Pavilion.

Nutwith Common Woods (VC65) 24 June 2023

INTRODUCTION (Terry Whitaker [TMW])

The YNU VC65 meeting to Nutwith Common Woods on the Swinton Estate was successful although sparsely attended by about fifteen people. They were mainly botanists and lepidopterists but they produced some interesting observations in other taxon groups, most of their records will be verified by our regional recorders. About half stayed on for the reporting meeting in the community run Hackfall Cafe in the Grewelthorpe Village Hall where tea and cakes were taken. The weather was forecast to be mainly cloudy and breezy with occasional showers but after a cool drizzly start it became very much warmer and sunny by mid afternoon. No one expected any outstanding records from this rather biologically poor plantation forestry area but a few interesting observations suggested that given the current improving management the situation could be changing. A few less common species in other taxon groups were found; especially interesting was the net-winged Beetle *Pyropterus nigroruber*.

The reporting meeting in the Grewelthorpe Community Cafe was chaired by the YNU President, Alastair Fitter, assisted by TMW and 9 people from 9 affiliated societies shared their observations.

BIRDS (Compiled by Charlie Fletcher [CF]).

28 species of bird were recorded during the day. Most of these were common woodland species such as Tree-creeper and Nuthatch and there were no major surprises. The most noticeable finds were a Woodcock flushed from vegetation, and a calling Marsh Tit.

OTHER VERTEBRATES (Compiled by Terry Whitaker [TMW])

Few vertebrates were seen except for Grey Squirrel, and European Rabbit. Mole hills were also present.

LEPIDOPTERA (CF & TMW) Larger moths & Micro-moths

The YNU Lepidoptera Group was invited to trap on the Friday night. Six MV traps along with three battery-operated traps were set up on the Friday night in four different 1K squares in order to include areas of birch, oak, sallow and rowan around the edges of the wood, along with beech and pine in the central areas. The night was warm and the breeze settled, and the traps were opened on the Saturday morning to reveal a large and varied catch. The total number of species trapped was an impressive 162, and with some additional day-flying species found on Saturday and one or two leaf-mining species, the final total was 167.



Scallop Shell *Rheumaptera* (= *Hydria*) *undulata* moth found in one of the 9 moth traps put out in several sites around the woods.
Photo: Terry Whitaker

Exuvium of Broad-bodied Chaser *Libellula depressa*.
Photo: Jill Cunningham



Six Clay Triple-lines *Cyclophora linearia* was a good total. This moth of beech woodland is doing well in the county and expanding its range. Scallop Shell *Rheumaptera undulata* was the most uncommon macro moth to be trapped (see above). Other interesting finds were single examples of Welsh Wave *Venusia cambrica*, Blackneck *Lygephila pastinum* and Gold Swift *Phymatopus hecta*. The assembled onlookers were also pleased to see six Peach Blossom *Thyatira batis*, seven Marbled White Spot *Protodeltote pygarga*, three Green Arches *Anaplectoides prasina* and seven Green Silver-lines *Pseudoips prasinana*. The commonest moth in the traps was the bracken-feeding Map-winged Swift *Korscheltellus fusconebulosa*, and the total of 182 was the biggest ever catch of this species in the county. The first of what would prove to be a very large influx of Silver Y *Plusia gamma*, a day-flying migrant moth, were also seen.

Micro-moths

A good selection of microlepidoptera were recorded. The most unusual were the bracken-feeding *Monochroa cytisella* and two moths of beech woodland, *Cydia fagiglandana* and *Strophedra weirana*, the latter being a species usually recorded as a larva and rarely seen as an

adult. The phone app ObsIdentify was demonstrated to provide pointers for identification or to support field identities for several micro-moths. In general it worked impressively well.

Butterflies (Paul Millard)

For those interested in butterflies this was an opportunity to visit four under-recorded 1km OS Grid Squares in one day. The character of the site is of a dense and largely homogenous Beech woodland with plenty of wide rides and footpaths with other tree species. In the sun filled glades the butterflies were to be seen nectaring on the plentiful bramble flowers. Noticeable by their relative absence, were the Vanessidae, which seem to be suffering after the drought and heat of 2022. In all eleven species were seen. Large Skipper and Small Heath were new records for the location, the latter now being a relatively unusual sight in lowland VC65. Other species seen were Meadow Brown, Speckled Wood, Ringlet, Small White, Large White, Green-veined White and Red Admiral. Larvae were identified of Orange-tip, Red Admiral and Comma; the latter were feeding on Wych Elm. There was also a tantalising glimpse of a large fritillary which was probably Dark Green but these days there is also a chance of Silver Washed fritillary which in 2022 was seen in several VC65 woods, but as yet we have no evidence of it breeding here.

COLEOPTERA (Jill Cunningham [JC] compiled by TMW)

No Coleoptera specialists attended the meeting but members especially JC made a number of casual records of mostly distinctive and common species. Four Ladybirds were recorded: Eyed Ladybird *Anatis ocellata*, larva (under Pine), 7-spot Ladybird *Coccinella septempunctata*, Orange Ladybird *Halyzia sedecimguttata* and the Harlequin Ladybird *Harmonia axyridis* was particularly common.

Two species of leaf beetles were noted: the Thistle Tortoise Beetle *Cassida rubiginosa* and the Green Dock Beetle *Gastrophysa viridula* which was very widely present on the pathside docks plants. However it was at a very low density with few adults and larvae and virtually no yellow egg clusters seen and the dock leaves were unusually intact. Despite considerable quantities of dead wood *Rupella maculata*, a black and yellow longhorn beetle, was the only cerambycid seen.

The Yorkshire Coleoptera Recorder Bob Marsh considered JC's record of *Pyropterus nigroruber*, possibly new to VC65, as interesting (see also the photo on p218). Most Yorkshire records are from old woodland in a NE/SW band from VC63 toward the east of VC62 with an outlier area in VC64. 'I think this species once considered a rarity is spreading (warming climate?)'. Its discovery in 2 widely separated habitats in different VCs in the same year is notable. A common Soldier Beetle *Cantharis nigricans* was the only other record.

DIPTERA (JC compiled by TMW)

A specimen was seen of the handsome large hoverfly *Xylota sylvarum* which is a typical woodland species with larvae that develop in rot-holes, fallen trees and rotting roots, feeding on the decaying wood. Not unexpectedly the Red-thighed St Mark's Fly *Bibio pomonae* was the most obvious and widespread dipteran. *Phytomyza ilicis*, the holly leaf miner, was encountered in all four of the woodland 1km squares. All mines examined showed successful emergence with no evidence of parasitism but it was not ubiquitous; many shaded holly trees showed no signs of the agromyzid fly.

JC found several other agromyzid leaf mines: *Agromyza anthracina* on *Urtica dioica*, *Amauromyza labiatarum* on *Stachys sylvaticus*, *Pegomyia laticornis* on *Arctium minor*, *Phytomyza chaerophylli* on *Anthriscus sylvestris* and *Liriomyza sonchi* (Nationally Scarce B), on *Lapsana communis* (confirmed by Barry Warrington).

HEMIPTERA (mainly JC compiled by TWW)

Four Common Shield bugs were seen: The Birch Shieldbug *Elasmotheresus interstinctus* was abundant and a few Hawthorn Shieldbug *Acanthosoma haemorrhoidale* were found in some of the moth traps. The Red-legged or Forest bug *Pentatoma rufipes* was also recorded.

Four species of Miridae were recorded. *Dereocoris flavilina* was found under Sycamore. This is an interesting mirid bug usually associated with sycamore and field maple, which rapidly colonised the UK following its arrival in 1996 (Miller, 2001). It is now widely established and common across south and central Britain. Common Nettle Bug *Liocoris tripustulatus* and *Calocoris alpestris*, and *Grypocoris stysi*, both found on Nettle and the striking Striped oak Bug *Rhabdomiris striatellus*. Beech Woolly Aphid *Phyllaphis fagi* was also seen.

ODONATA (compiled by TMW)

Three dragonflies were reported: Golden Ringed Dragonfly *Cordulegaster boltonii*, an Aeshnid dragonfly, probably the Common Hawker *Aeshna juncea*, two exuvia of the Broad-bodied Chaser *Libellula depressa* (see p221) found by DTNFC members on rushes on the fringe of the small pond at the eastern margin.

HYMENOPTERA Aculeata (JC & TMW)

Few bees and wasps were around except for the honey bee *Apis mellifera* but the White-tailed Bumblebee *Bombus lucorum* was common in all four 1km squares of the woodland. A splendid solitary wasp *Crossocerus dimidiatus* was caught by JC (see p219).

SAWFLIES (compiled by TMW)

Tenthredo mesomela, a large green and black sawfly was confirmed provisionally but Ian Andrews the County Recorder will examine the specimen to exclude its much rarer relative. *T. mioceras*.

FLOWERING PLANTS (JC)

Several members contributed to a list of over 125 species of flowering plants but the highlight was undoubtedly Field Garlic *Allium oleraceum* found by Dan McAndrew on grassland near the northern access gate.

FERNS and FUNGI (JC & TMW)

Very few species were present with only three species recorded. Bracken *Pteridium aquilinum* was the most common especially in the areas opened up by felling. Male Fern, *Dryopteris filix-mas* was occasional and Broad-Buckler-fern *Dryopteris dilatata* was found in the area of the ponds. A list of 28 fungi was made but as the weather had been mainly cool and dry previously the majority were mildews, rusts and fungal allies rather than the larger fungi.

COMMENTS ON CONSERVATION

The two small ponds on the southern margin are very shallow and the parts within the estate boundary were mainly dry when we visited. If these areas were extended by excavations on Swinton Estates' land and tree shading reduced, their biodiversity would be greatly enhanced.

The mainly beech wood areas at the western end are an even aged closed canopy plantation woodland with little ground cover vegetation. If there was progressive thinning by extraction of timber to open up the woodland that would greatly benefit biodiversity by allowing development of an understorey.

ACKNOWLEDGEMENTS & THANKS

Thanks were given to the Swinton Estate for allowing access to the woodland and for expediting access for the moth trappers on the woodland tracks.

Especial thanks were made to the staff of Grewelthorpe Community Cafe who welcomed us with excellent tea and cakes for participants who were becoming fairly dehydrated on what had developed into a very warm day.

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Hornsea Mere (VC61) 1 July 2023

INTRODUCTION (Africa Gómez)

Nine members from 10 affiliated societies attended the excursion on a mild overcast day with brief sunny spells and a westerly wind. After meeting Mr George Bennett, the Wassand Bird Hide and Wildlife Society Warden, who has lived by the Mere most of his life, we were led to the bird hide along the woodland path across Decoy Plantation, while he recounted the highlights of the mere: Bearded Tits likely breed, four pairs of Marsh Harriers, Hobbies and Otters. Mute Swans gather in the Mere during the summer in a large moulting flock, about 200, with eight breeding pairs. There was plenty of botanical and entomological interest along the way. The most botanically oriented were soon left behind whilst recording at the woodland. Despite the very dry spring in East Yorkshire, there were waterlogged areas and evidence of woodland ponds and ditches in the area. Much fallen wood was also present.

At the Wassand hide, which allows rare views across the western end of the Mere, thick beds of Bullrushes, *Typha latifolia*, with patches of Common Reeds, *Phragmites australis*, were in evidence. Two Hobbies and a pair of Marsh Harriers gave us great views. Swifts flew overhead. The scrub outside the bird hide was good for observing a range of insects.

Upon returning to the Hall for the reporting meeting, we were delighted by a pair of Spotted Flycatchers (Fig. 1), carrying food to one of the outbuildings, indicating a nest with chicks. Spotted Flycatchers have suffered strong declines, particularly in East Yorkshire, and holding at least a breeding pair indicates the suitability of the habitat, and availability of insects, in the area. We gathered in the conservatory and given we were only seven members at that point,

we had a very informal reporting meeting over tea and cake. At the car park, Richard Shillaker spotted a particularly notable species resting on a car near the Hall: a Large Marsh Horsefly, *Tabanus autumnalis*, a male. This horsefly is associated with wet grassland and marshy areas, especially where cattle are present. It is mainly a southern species in the UK, with only three other VC61 records known to the organiser of the national Soldierflies and Allies Recording Scheme. Another interesting live-insect-on-car observation was the presence of several Grousewing Caddisflies, *Mystacides longicornis*, settled on a car near Kirkholme Point. This is a rather distinctive Caddisfly with long antennae and red eyes, the common form observed here having yellow and brown banded wings. Crifftin's pond was visited, with permission, by Richard Shillaker who noted that the fringing 'reeds' were much more extensive than they had been in the past.



Figure 1. Spotted flycatcher, one of a pair, carrying what is probably a Holly Blue butterfly to its nest site. Photo: Africa Gomez



Figure 2. Milk-parsley, *Thysselinum palustre* (see p.226). Photo: Alastair Fitter.

MAMMALS, REPTILES AND AMPHIBIANS

Mole hills were noted, as well as Rabbit pellets and scrapes. Numerous young Common Toads were observed crossing the paths.

BUTTERFLIES, MOTHS and ODONATA

The sheltered areas by the footpath to the bird hide held numerous Meadow Browns, some Ringlets, a Comma and a Red Admiral. Notably, a Speckled Wood female was seen ovipositing on grasses on the side of the footpath. A Common White Wave moth was noted. Three Southern Hawkers were seen, all of them stopped to bask eventually. A Broad-bodied Chaser was briefly seen, as well as a Four-spot Chaser at the farm pond. Hundreds of Common Blue Damselflies were sheltering on the woodland paths and rides.

BEETLES (Bill Dolling)

Undoubtedly the most significant insect of the day was *Pyropterus nigroruber* (Fig.3), found by Helen Kitson. This saproxilic beetle has a northern distribution, from Scotland down to Derbyshire and North Lincolnshire and is associated with dead wood in ancient woodlands. Adults are short-lived so the species may be under-recorded. It is rated nationally Notable A. There are 32 records for *P. nigroruber* in Yorkshire, only two of them for the virtually treeless East Riding. Also recorded was the longhorn beetle *Agapanthia villosa*, the click-beetle *Melanotus castanipes*, the only Yorkshire species in the genus and fairly frequent, and Red-headed cardinal beetle, *Pyrochroa serraticornis*, the latter noted by Sara Robin.



Figure 3. *Pyropterus nigroruber*, a saproxilic net-winged beetle, is a rarity in Yorkshire.

Photo: Jill Cunningham

OTHER INVERTEBRATES

Of note was a couple of Copse Snails, *Arianta arbustorum*, and plentiful Common Field Grasshoppers, *Chorthippus brunneus*, around the Hall's outbuildings. Wool Carder Bees, *Anthidium manicatum*, were observed by several members around a clump of Lamb's Ears, *Stachys byzantina*, planted in the walled garden.

PLANTS (Gabrielle Jarvis and Alastair Fitter)

There was a division of labour from the start. Alastair Fitter and Sara Robin went off to search the reedbeds for Milk-parsley, *Thysselinum palustre*, last seen in 2011 by Peter Cook from a boat on the mere (see Fig 1, p225). Milk-parsley is the food plant of the Swallowtail butterfly, last seen at the Mere about 200 years ago. The rest, all HNHS members, had permission only to explore the Decoy Plantation as far as the Wassand Hide and to access the Hall grounds. In addition to common ruderal species, along the drive there were two introductions, one accidental - a single plant of Blue Sowthistle *Cicerbita macrophylla*, most likely bird sown, by the entrance gate; further in, Nettle-leaved bellflower *Campanula trachelium* in neatly positioned rows of purple and white had obviously been planted. The headrow of an arable field had been sown with a conservation wildflower mix including Cornflower *Centaurea cyanus*, and Lucerne *Medicago sativa* ssp. *sativa*. Musk Mallow *Malva moschata* grew wild at the edge.

Amongst the ground flora of Decoy Plantation were Dog's-mercury *Mercurialis perennis*, Sanicle *Sanicula europaea* and Bluebell *Hyacinthoides non-scripta*, species which you would expect to

find in old semi-natural woodland, each one, however, represented by a single plant or small patch. More rewarding was a small area of reedbed adjacent to the hide which yielded Skullcap *Scutellaria galericulata*, Gypsywort *Lycopus eurpaeus*, Fool's Watercress *Apium nodiflorum*, Bulrush *Typha latifolia* and Branched Bur-reed *Sparganium erectum*. So far, an uninspiring survey and yet the meeting was a resounding success!

During their, albeit riskier, exploration of a small area of reedbed at TA 179464, Sara and Alastair successfully located Milk-parsley. It is reassuring to find that this species survives at what is now possibly its last Yorkshire locality. The Swallowtail butterfly is regarded as threatened in its surviving localities in East Anglia because of rising sea-levels, and it is possible that a reintroduction programme may be needed for it to survive as a British native, though the reed area at Hornsea is probably not extensive enough to support a colony.

This floristically rich reed bed also yielded Greater Water-parsnip *Sium latifolium*, Purple Small-reed *Calamagrostis canescens*, Water Dock *Rumex hydrolapathum*, Common Meadow-rue *Thalictrum flavum* and a hybrid Willow *Salix x smithiana*. *Sium latifolium* is another scarce species, at the northern edge of its range in Yorkshire where it occurs in only a handful of places. The reed-fen at Hornsea is therefore a significant habitat, but it would require some younger, fitter botanists to explore it properly.

References

Hyman, P.S. and Parsons, M.S. 1992. *UK Nature Conservation No. 3. A review of the scarce and threatened Coleoptera of Great Britain*, part 1. Joint Nature Conservation Committee.

Forest of Flowers, Huby (VC62) 22 July 2023

INTRODUCTION (Sarah White)

The weather forecasters had predicted a wet day and unfortunately they were right. It was wet from the start and although there was a brief lull around lunchtime, the rain soon set in again so it was decided to hold the tea and meeting earlier than usual. This was extremely disappointing, particularly as the Forest of Flowers is such a good site for butterflies. However, against all the odds, we had a very enjoyable and productive day. Special thanks, not only to Alwyn and Tom, but also to the 12 hardy souls (representing 7 affiliated societies) who attended.

A particular bonus was the moth trapping (Fig. 2, p230); as the previous evening had not been too wet, there was a good catch from the traps and opening these in the shelter of the large gazebo, thoughtfully provided by Alwyn and Tom, was a highlight of the meeting with 51 new species added to the Forest of Flowers site list.

The Excursion also served as a very useful introduction to the site, and especially to those who might wish to visit again in better weather. Alwyn and Tom would welcome YNU members to visit and record on the site by prior arrangement. Please contact them on forestofflowersyork@gmail.com

GEOLOGY (Ken White)

The bedrock is Triassic Mercia Mudstones overlain by Quaternary superficial deposits of Sutton Sand (Devensian glacial lake deposits and till) giving a mix of sand and clay soil.

BIRDS (Ken White)

A total of 20 species were seen or heard on the day, a very good number given the weather and the time of year. Evidence of breeding included Swallows nesting in the barn (three nests with young, on at least their second broods according to Alwyn); at least one Juvenile Buzzard calling noisily from a nest in a group of pine trees; Reed Buntings collecting food; a family of Bullfinches; Willow Warblers and Wrens alarming, indicating broods. There were also eight species singing. All these observations are evidence of a prolonged breeding season with a resurgence after the severe spring drought. Early broods must have perished so it is good to see evidence of successful broods now.

Alwyn and Tom reported that they had recently had a Green Sandpiper in one of their ponds.

MAMMALS, REPTILES & AMPHIBIANS (Sarah White)

We saw Roe deer footprints and molehills. Tom and Alwyn said that there is a badger sett, sometimes used by foxes. Hedgehogs and rabbits are also present. Froglets were seen as well as a squashed toad. No snakes or slow worms are recorded from the site.

CONCHOLOGY (Terry Crawford)

It is popularly supposed that slugs and snails thrive in wet conditions, however persistent heavy rain, as on this occasion, can reduce activity. It also makes recording more difficult! I stayed in the area of the old farmhouse and garden and found eight common species: Cope Snail *Arianta arbustorum*, Dusky Slug *Arion subfuscus*, Common Garden Snail *Cornu aspersum*, Notted Field Slug *Deroceras reticulatum*, Kentish Snail *Monacha cantiana*, Cellar Snail *Oxychilus cellarius* and Hairy Snail *Trochulus hispidus*. The remaining taxon was several specimens of a large *Arion* species which proved difficult to identify. They were rich brown with darker lateral bands, a slightly red foot fringe, not particularly coarse tubercles, and a strikingly white foot sole. As well as their size, the mucous colour test did not indicate *A. subfuscus*. Very wet conditions can leach out colour pigment from the foot, but these soles seemed white beyond that possibility. A site that was until recently arable and sheep farming would not be expected to have a rich molluscan fauna. On the other hand, the recent extensive plantings of trees, shrubs and wildflower species could well have introduced molluscs to the area. A further visit under better conditions could reveal more species and possibly resolve the identity of the large *Arion* sp.

LEPIDOPTERA (Richard Baker)

Despite continuous rain from 1 am to 7 am, a minimum temperature of 13°C and a light west to south-westerly breeze (source: Meteosat data from Linton-on-Ouse), 134 species including 58 micros were caught. Six traps were deployed. Four were mains powered (two Robinson traps with mercury vapour bulbs and two Heath traps with fluorescent bulbs) and sited near the farm buildings. Two were battery powered (one Heath and one Skinner trap with fluorescent bulbs) and placed 250 metres away in amongst the meadow and young broad-leaved woodland vegetation. Richard Baker, Michele Beverley, Lindsey Bowes, Alwyn Craven and Tom Hook

set out the traps. Identifications were performed by Richard Baker, Terry Crawford, Alastair Fitter, and Terry Whitaker. The very large number of moths and traps meant that only the total number of macro moths (589) was recorded.

While no special rarities were caught, the YNU visit added an impressive 51 new moth species to the Forest of Flowers site list bringing it to 290. These included the first record of the damaging non-native Box-tree Moth *Cydalima perspectalis*. The addition of 38 new micros was particularly notable and included some species with few VC62 records, e.g. *Grapholita janthinana*, *Donacaula forficella* and *Phycitodes binaevella*. Genitalia determination by Terry Whitaker of *Cnephasia stephensiana*, *C. asseclana*, *C. incertana*, *Phycita roborella* and Common Rustic *Mesapamea secalis* greatly helped our understanding of the species present at this special location. During a brief lull in the almost continuous rain, several butterflies were seen. These were Meadow Brown, Gatekeeper, Red Admiral, Large White, Ringlet, Green-veined White and Painted Lady. Several Cinnabar (*Tyria jacobaeae*) larvae and one leaf mine (*Mompha raschkiella* found on *Epilobium (Chamaenerion) angustifolium*) were recorded.

COLEOPTERA

We saw Harlequin Ladybird, 7 spot Ladybird, and *Chrysomela aenea*.

Nicrophorus investigator and a Hornet *Vespa crabro* were attracted to the light trap.

FRESHWATER BIOLOGY

Two caddis from the light traps, both males, were identified by Sharon Flint as *Limnephilus lunatus* and *Limnephilus flavicornis*.

FLOWERING PLANTS (Sarah White)

A list of 146 species was made on the day. This is a very impressive total for land which was farmed until recently and the site certainly lives up to its name as 'The Forest of Flowers'. Many of these species were introduced as part of the rewilding programme and provide a wealth of feeding and nectaring for butterflies and other insects. Even in the rain the wonderful stands of flowering Creeping Thistle smelled of honey, and with every step we were putting up insects sheltering in the damp vegetation. A separate field across the road has been sown with seed from the Lower Derwent Valley and here we found Great Burnet *Sanguisorba officinalis*. On the edge of one of the ponds we were delighted to see Cyperus Sedge *Carex pseudocyperus* (Fig. 1. p230), Marsh Speedwell *Veronica scutellata* and Tubular Water-dropwort *Oenanthe fistulosa*.

PLANT GALLS (Ken White)

Alder Tongue galls *Taphrina alni* were found on numerous Alder trees on site and were at the particularly eye-catching stage of growing bright red glowing tongues (See front cover). Several specimens of Creeping Thistle Gall *Urophora cardui* were found in the stems of Creeping Thistle, caused by the larvae of a Picture-winged Fly, very much on the northern limit of its range here. Several specimens of Robin's Pincushion *Diplolepis rosae* were found on the rose bushes.

MYCOLOGY

A small patch of False Oat-grass *Arrhenatherum elatius* was found to be infected by Ergot of Rye *Claviceps purpurea*. Several sclerotia were hanging from the flower spikes and are actually modified florets and therefore technically are galls. Ergotism in cereal crops in the

past has had profound effects on the course of human history. We also noted infection by Ash Dieback *Hymenoscyphus fraxineus* and the mildew *Melampsorum caprearum* on Goat Willow.



Figure 1: Cyperus Sedge *Carex pseudocyperus*



Figure 2: Privet Hawkmoth *Sphinx ligustri*.

Photos: Ken White

HISTORICAL

This area is part of the ancient Forest of Galtres. The Forest would have been a patchwork of trees and other more open habitats on wind blown sand and heavy clay, part of which still survives at Strensall Common. It was a Royal Hunting Forest and provided timber (for example for the timber palisades of York castle) and there were Common Rights such as Pannage. Within the Forest of Galtres a motte-and-bailey castle was built at Sheriff Hutton. The Forest was at its greatest extent in the reign of Henry II but was disafforested in the 17th Century as the Crown was short of money. The Forest of Flowers farm was the Home Farm to Burn Hall along the road to the west. Enclosures are probably early 18th century here.

FUTURE MANAGEMENT

While Alwyn and Tom have planted 42,000 trees and shrubs, quite densely in places, their long-term vision is for a mosaic of trees, meadows and other habitats. The excavation of 17 new ponds has been particularly successful.

ACKNOWLEDGEMENT AND THANKS

Our grateful thanks go to Alwyn and Tom at the Forest of Flowers and to the local team who set up the moth traps and recorded the catch. This is a wonderful place which deserved better weather for our visit. Despite the pouring rain some useful data were collected, particularly moths, and we enjoyed a cosy tea and meeting in their weatherproof gazebo with delicious homemade cakes and good conversation.

Potteric Carr YWT Nature Reserve (VC63) 12 August 2023

INTRODUCTION (Joyce Simmons)

The excursion to Potteric Carr began on Friday evening with moth and bat recording around the visitor centre until midnight. Also, an all-night trap, run in a secure area in the centre of the reserve by Ian Heptinstall, trapped 94 species of moths.

On the Saturday 24 members were led by Jim Horsfall on a route around the reserve which included areas normally closed during the bird breeding season. The dragonfly ponds and Loversall Pool were a rich hunting ground for botanists, entomologists and for pond life. Blue-tailed and Emerald Damselflies were in evidence, and pond dipping yielded newt efts, probably of several species, many Waterboatmen, Water Beetles and a handsome Water Scorpion.

Calcicole plants, such as Yellow-wort *Blackstonia perforata* and Common Centaury *Centaurea erythraea* flourish on the limestone paths alongside plants of acid situations such as Woody Nightshade *Solanum dulcamara* and Greater Birds-foot Trefoil *Lotus corniculatus*. Louise deployed a grappling hook to drag 3 species of *Potamogeton* from the deeper water.

Lunch, with the luxury of picnic tables, was necessary before the party ventured across the centre of the reserve on a path between the major waterbodies. From here we could see Lapwing, Black-tailed Godwit with Sandwich and Common Terns overhead. The watery track had Marsh Stitchwort *Stellaria palustris*, Marsh Thistle *Cirsium palustre*, Lesser Stitchwort *Stellaria graminea* and Scullcap *Scutellaria galericulata* beside it. Here were droppings of Muntjac Deer, a Badger latrine and tracks of Roe Deer. Frogs and toads hopped around our feet. A metre-long Grass Snake was also seen.

We next walked to Piper Marsh Scrub and Seven-Arches Carr. These are areas of development in which the wet grassland is being restored as scrub is removed. This restoration is rapidly yielding results with a rich flora and associated insect life moving in to the desirable habitat. The return to the visitor centre gave sightings of a Stoat, with a Chicken-of-the-Woods fungus growing on a tree beside the path. The reporting meeting in the Visitor Centre with tea and cakes was much appreciated after a rewarding day full of interesting findings, with something new for everyone.

Our very grateful thanks to Jim Horsfall for an excellent day. We hope that some of the findings may be new for the reserve, which is cared for by its excellent staff and volunteers.

BOTANY (Kay Woodward)

It was a fine, warm day with just a few spots of rain. YWT Reserves Team Leader (South Yorkshire) Jim Horsfall began by saying he would lead the group around areas of the reserve not usually open to the public!

Exiting from the visitor centre we began exploring the small ponds. Species included grey club-rush *Schoenoplectus tabernaemontani* and clustered dock *Rumex conglomeratus*. The mix of leaves and tepals which have large oblong white warts were looking particularly attractive at this time of year. We recorded more nice finds, including Tufted Forget-me-not *Myosotis laxa* ssp. *caespitosa*, distinguished from Water Forget-me-not *M. scorpioides* by the short style. We

also saw Brookweed *Samolus valerandi* and Imperforate St. John's-Wort *Hypericum maculatum*.

After lunch, the group had a look at some aquatic plants in the Mother Drain, which luckily had good visibility - it is normally too turbid to see these plants. Louise collected three types of pondweed, Lesser Pondweed *Potamogeton pusillus*, Fennel Pondweed *Stuckenia pectinata* and Curled Pondweed *R. crispus*. We walked through the reed beds and spotted four Golden Dock *Rumex maritimus* (see Fig. 1) in Huxter Well. Louise waded in to collect a small sample and we had a look at the spiky tepals on the seeds. It is very similar to Marsh Dock *Rumex palustris*.

A highlight of the day was exploring Piper Marsh Scrub, which is not normally open to the public. The area had recently been cleared of willow, and the peat and also Magnesian Limestone influence had created an interesting mix of species including Cyperus Sedge *Carex pseudocyperus*, yellow sedges *Carex* sp., Plicate Sweet-grass *Glyceria notata* and Purple Small-reed *Calamagrostis canescens*. Bladderwort *Utricularia australis* was one of the best records of the day. It was quite a sun trap in this clearing, but it was worth waiting in the heat when Jim emerged through the vegetation with a small piece of flowering Bladderwort. We had ice cream back at the visitor centre to cool down!

MAMMALS & LOWER VERTEBRATES (Colin Howes)

A bat detector patrol around the car park and the visitor centre encountered Common Pipistrelle at 35kHz taking insects attracted to security lighting. A single Noctule calling at 20kHz passed high over the visitor centre lake at 10:30pm.

4 'Konik' ponies, an ancient Polish breed similar to the wild horse present in Britain during the Palaeolithic times, were introduced to Potteric Carr in June 2022 to assist in conservation grazing management of wet grassland habitats. Today they were grazing on Huxter Well Marsh.

Badger signs (diggings and dung pits) were found widely throughout the reserve; Rabbit, Squirrel, Smooth Newt (see Fig. 2) and Frog, and Toad were seen. Signs of Roe Deer and Stoat.



Figure.1 Golden Dock *Rumex maritimus*. Figure.2 an eft Smooth Newt

BIRDS (June Birchell, Paul Simmons)

At this stage of the breeding season many birds have lost the need to sing to maintain their territories, and are feeding quietly in their preferred habitat. Hence it can be difficult to get good views of woodland and grassland species, though tits and a Treecreeper were seen. The large water bodies in the reserve therefore provided the best chance of finding birds. Great-crested Grebes and Mute Swans with cygnets were there. The most interesting species of the day was a Great Egret, a bird which is now present in small numbers in many parts of the UK. A few Black-tailed Godwits were seen, some still in their striking black summer plumage feeding up before continuing their migration south. Two species of Tern, Common and Sandwich, were feeding up before migrating away from the area within days. A flock of 23 Swifts would also have been feeding up and preparing for their long flight to southern Africa.

ARACHNIDA (Colin Howes)

Nocturnal searches showed that populations of the 'Bridge Orbweb spider' *Larinioides sclopetarius* are concentrated around the security lighting on the visitor centre. The extensive wooden balustrades around the visitor centre harboured an impressive population of the 'Walnut Orbweb spider' *Nucenea umbratica*.

Harvestmen: *Leiobunum blackwalli*; *Lophopilio palpinalis*; *Paroligolophus agrestis*. The substantial population of *Dicranopalpus ramosus* formerly on the exterior of the Education centre appears to have died out.

ACULEATES - BEES, WASPS & ANTS (Andy Millard)

Weather was not ideal for aculeates and nothing of great significance was recorded. Common bumblebees *Bombus pascuorum*, *B. lapidarius* and *B. lucorum* agg. were sporadically noted throughout the day, along with Honey Bees *Apis mellifera*, although an unusually dark variety of the last of these with bright pinky-orange pollen in the pollen baskets stood out as it foraged on *Pulicaria*. Two *Lasioglossum albipes* bees were taken by Dave Williamson close to the Education Centre and an *Ectemnius continuus* wasp was recorded near Black Carr Field. Colonies of *Lasius niger* agg. ants were found at two locations, including one where it had infiltrated the gap between a gate and its post!

LEPIDOPTERA - Evening Mothing (Dave Williamson, Harry Beaumont, Paul Simmons)

A total of 59 species of moth were captured near the Visitor Centre. The Actinic closest to the building was most successful, though several Hornets *Vespa crabro* (which were also attracted to the light) had to be temporarily imprisoned to prevent a moth massacre!

Harry's mercury vapour trap was in a rather draughty place, and the rather weak light placed in more open ground attracted a different set of moths. Our catch included: Old Lady, Silky and Fen Wainscots, Sallow Kitten, Copper Underwing. The all-night moth trap, in the centre of the reserve attracted 94 moth species and unfortunately more hungry Hornets. However, an excellent range of moths were trapped, such as Maiden's Blush, Canary-shouldered Thorn, Coxcomb Prominent, Twin-spot Wainscot – to pick a few at random.

LEPIDOPTERA (Paul Simmons, Dave Williamson)

The weather on the day was cloudy with little evidence of the sun. This makes butterflies and moths harder to find. Day-flying moths were few and far between, but sweeping the vegetation

with a net yielded several species including Shaded Broad-bar, Cinnabar, Golden-rod Pug and Mother of Pearl. Butterflies proved more visible and 8 species were seen, the more notable being Common Blue and Small Copper. These feed on legumes and sorrels respectively, both being plentiful in the reserve in suitable areas. The vanessid butterflies, Peacock, Comma and Red Admiral were present in low numbers.

OTHER INSECTS (Dennis Giggall, Jim Horsfall, Dave Williamson, Colin Howes)

Many records were collected throughout the day in the various habitats which we visited. There were surprisingly few Dragonflies, perhaps as the weather was cloudy in the morning. Common and Ruddy Darters were most numerous, and a Common Emerald was seen. Bugs were found by several observers. Hawthorn, green and Hairy Shield bugs were recorded, as was Bishop's Mitre, a shield bug which has recently moved north.

Orthoptera – Field, Slender and Meadow Grasshoppers and Long-winged Cone-head were found in grassy areas.

Many Coleoptera and Diptera representatives were seen.

PLANT GALLS (Peter and Annefie Roberts, Nora Boyle)

The plant gall noticed by everyone was the Thistle Gall *Urophora cardui*, which is now frequent on Creeping Thistles in the area, though only a recent arrival. Knopper Galls, caused by the wasp *Andricus quercuscalicis* crunched underfoot beneath oak trees.

FUNGI

Fungi were little in evidence at this time of the year, though Common Earth Balls *Scleroderma cirrinus* and Jelly Ear *Auricularia auricula judae* were noted by Michelle Winder.

Book Review

***Flowers and Ferns around Huddersfield* by M. Jill Lucas, 2023**

This is an update of the 1985 publication of the same name by M. Jill Lucas and Jack Middleton. The new publication is a useful checklist of the wild plant species that have been recorded in the drainage area of the Holme and Colne Valleys, from 1986 to the present day. However, it is more than just a list of plant names. An indication of local abundance (number of monads the plant was found in) is shown for each species and, for some species, there is additional information such as when and where it was first recorded and habitat information for the site. Although the book is entitled *Flowers and Ferns Around Huddersfield*, the species also include clubmosses, horsetails, conifers, grasses, rushes and sedges. The 119 page paperback is just larger than A5 size and appears to be printed on good quality glossy paper. Instead of the line drawings of selected plants in the 1985 version, the updated version has 14 pages of colour photographs, two photographs per page, in the centre of the book, giving a flavour of some of the plants to be found in the area.

The preface explains that records were collected on a monad (1km Ordnance Survey square or part thereof) basis, with a total of 1,009 species recorded from 227 monads. The plants

recorded include native and introduced species that were found growing wild, including hybrids and garden escapes. However, I noticed that some of the species listed in the main section, such as several conifers, are noted as 'planted'. I assume that Jill collected many of the records herself but the list of people or groups who have supplied botanical records numbers 45 and Jill thanks seven people by name in the acknowledgements for their assistance in either contributing records, confirming/correcting records or identifying species at Jill's request. It's worth noting that for the 1985 version, the records were collected on a tetrad (2km square) basis and garden escapes were not included.

The preface includes a brief description of the geology and typical habitats of the area and an interesting summary of historical natural history recording in Huddersfield. The majority of the publication is taken up by a table, called the 'Systematic List', with a column for the plant name, whether it is native or introduced to the British Isles, the number of monads the plant was found in and 'comments'. The publication includes a glossary (very short), a bibliography and an index of plant species.

Although there are a number of aspects I would have done differently myself, I feel I should mention the following minor issues:

The 1985 version included a map of the survey area and another map showing the river basins of the Huddersfield area, which I think would have been useful to include in the updated version, as they make it easier to visualise the survey area.

- The Systematic List mainly follows the sequence and nomenclature of Stace's *New Flora* (1991). It's a shame the nomenclature doesn't follow the most recent edition of Stace's *New Flora*, but there is no confusion over the species being referred to.
- I noticed an error with a grid reference on page 9 listing the monad locations (SE0202 should read SE0209).

Jill's book is not only an important record of the plant species to be found in this area, but will surely be an inspiration to many, demonstrating the importance of collecting and sharing plant records. There is an element of humour, where Jill explains her heroic efforts to visit as much of the survey area as possible with some interesting tales to tell! Jill has clearly put a great deal of work into carefully collecting records and she should be very proud of her achievement of ensuring this accumulated knowledge is passed on to others. This book is a must-have for anyone with an interest in the flora of the Huddersfield area.

The book is available from Jill (jillyha-han@hotmail.co.uk) directly and costs £8 (postage and packaging are extra).

Susan Simcock

John Newbould BEM

John Newbould, a long-time member of the YNU, receiving the British Empire Medal from Angus Campbell, Lord Lieutenant of Dorset, at Portland House, Weymouth, on 23 October, for voluntary services to ecological surveying and data collection (see *The Naturalist* 148: 146-147. Photo: Catherine and James Crowfoot.



YNU Notices:

Communication with the membership

A majority of members now use email and so this provides a convenient means for us to communicate with you. However, our Membership Secretary, Clare, when sending out emails, quite often gets a 'non-delivery' message or, when requiring a response, doesn't get one, suggesting the email hasn't been read.

For those of you who wish to communicate with us by email 1) please ensure that we have an up-to-date email address for you and 2) check your spam folder regularly and amend the settings if YNU emails are ending up there.

Many thanks!

YNU Questionnaire

Many of you will be aware that the YNU has been sending out questionnaires to representatives of affiliated societies and individual members. These form part of YNU plans to improve links between itself and the wider membership, both individual and affiliated societies. We have given 22nd January as a deadline (which may be before you receive this edition of *The Naturalist*). However, even if you haven't met the deadline, we should be extremely grateful if you could return your completed questionnaires.



Yorkshire Naturalists'
Union



Chartered Institute
of Ecology &
Environmental
Management

Joint YNU and CIEEM Conference

The 'Amateur' Naturalist and Professional Ecologist: Bridging the Gap

At a time when awareness of the biodiversity and climate crisis is greater than ever, it is vital that all avenues for tackling it are explored. The biodiversity element can only be addressed effectively if we have the necessary data. This conference will examine aspects like big data, citizen science and, in particular, ways in which the 'amateur' naturalist (often highly knowledgeable about a particular taxon) and professional ecologist can work together to address these issues.

Date: Saturday 9 March, 09:30 – 10:00 Registration, Conference 10:00 – 16:30

Place: The Hemming Suite - St George's Conference Centre, 60 Great George Street, Leeds, LS1 3DL

Leeds Railway Station is about 15 minutes' walk away. Car parking is available at The Light Q-Park, St John's Centre, and the Merrion Centre, all within 5-8 minutes' walk of St George's Centre.

The conference fee, which includes lunch, is £30 for YNU and CIEEM members, £40 for non-members and £15 for students. For booking and payment visit the YNU website (<https://www.ynu.org.uk>) Join-the-YNU→YNU shop→categories-listing or contact: The YNU Membership Secretary, c/o NEYEDC, Unit 7, Hassacarr Close, Dunnington, York, YO19 5SN ('01904 641631; membership@ynu.org.uk).

If any member of the YNU would like to give a presentation at the conference, or has any other queries please contact Becky Bailey at beckybailey101@gmail.com (Tel. 07809 461331).

Mass stranding of Sperm Whales *Physeter macrocephalus* on the Holderness coast, 24 December 2020

Colin Howes & Africa Gómez

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From 1563 to 2023 there have been 19 recorded Sperm Whale stranding on the Yorkshire coast (VCs 61 & 62) from the Tees to the Humber. Records up to 2006 are reviewed in Howes (2010). Since then there have been single strandings at Saltburn (NZ62) June 2010; Redcar (NZ62) 31 May 2011; the Holderness coast April 2023 and the mass stranding of seven specimens from Tunstall (TA3132) to Withernsea (TA3427) 24 December 2020.

At around 08.30hrs on Christmas Eve 2020 members of the public alerted the Coastguard service of the stranding in heavy seas of several whales close to the beach at Waxholme (TA3230). Emergency services, including the Police, British Divers Marine Life Rescue (BDMLR) and RSPCA were alerted and seven Sperm Whales were located in the surf between Tunstall and Withernsea. Although some stranded alive, there was no prospect of guiding them to deep water due to the sea state and their immense bulk and sadly all perished (see fig.1). A team of biologists under the leadership of Dr. Rob Deaville from the Institute of Zoology on behalf of the Cetacean Stranding Investigation Programme (CSIP) attended the scene to record the event and take tissue and dental samples of five of the carcasses, their activities witnessed by A.G. (see Gómez, 2020). This was the largest documented Sperm Whale stranding on the English coast and second largest in the UK recorded by the Natural History Museum from 1913 and by the CSIP since 1990.

In North Atlantic Sperm Whale populations, sexes are geographically segregated; juvenile and adult males live in higher latitude cold waters, while females and dependent calves remain throughout the year in family groups in warm, tropical seas. In the eastern North Atlantic, the Canaries and Azores are important breeding/nursery grounds. Immature males leave their natal groups at 10-15 years, when they join ‘bachelor groups’ and migrate north to feed.

Table 1. Periodicity of Sperm Whale strandings in Yorkshire waters									
Temporal period	1563 to 1825	1900 to 1949	1950 to 1959	1960 to 1969	1970 to 1979	1980 to 1989	1990 to 1999	2010 to 2019	2020 to 2023
No. of strandings	3	1					4	3	8

The recent accumulation of Yorkshire records, increases the possibility of interpreting the biology of these otherwise random occurrences. Periodicity of stranding records, particularly after the cessation of commercial whaling in the 1980s, suggests a population recovery in the North Atlantic (see Table 1) but fails to explain the significant increase in migrating pods inadvertently entering and being fatally trapped in the shallows of the southern North Sea. This phenomenon has been monitored in coastal waters elsewhere in the North Sea basin, notably Denmark, Germany, Holland, Belgium and France to the Straits of Dover (Smeenk, 1997; Pierce *et al*, 2007). Table 2 shows seasonal trends based on social groups migrating off the continental shelf to the

west of the British Isles. During northerly feeding migrations up to polar waters in spring and summer some inadvertently enter the North Sea possibly via the the Faeroe-Shetland deep water channel. Their return movement in autumn and winter evidently also uses this channel and possibly the Norwegian trench, taking a ‘wrong turn’ into the Northern North Sea.

Table 2. Seasonality of Sperm Whale strandings in Yorkshire waters												
Month	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb
No. of strandings		1	2	1	1				1	10	1	1

Whilst in deep sub-arctic/arctic waters, their major food source is the Arctic Squid *Gonatus fabricii* (Pierce *et al*, 2007). The stomach contents of two of the sampled Tunstall whales contained numerous *Gonatus* squid beaks, though no evidence of local prey species, indicating they had not fed since entering the North Sea. Though there was no evidence of the whales ingesting plastics or marine debris, one had sustained deep parallel linear scars across its head consistent with a non-fatal vessel interaction.



Figure 1. Adult male whale at Withernsea, with open jaw showing 23 pairs of teeth.
 Photo: Africa Gómez.

References

Howes, C.A. (2010) Sperm Whale *Physeter macrocephalus* strandings on the Cleveland, North Yorkshire and Humber coastlines. *The Naturalist* 135: 203-208.

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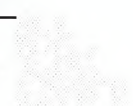
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Smeenk, C. (1997) Strandings of sperm whales *Physeter macrocephalus* in the North Sea: history and patterns. In: Jaques, T.G. and Lambertsen, R.H. (eds) *Sperm Whale Deaths in the North Sea. Science and management.* Bull. Inst. R. Sci. Nat. de Belgique, Biologie, 67 (suppl): 15-28.

YNU Calendar for 2024

For further details and updates visit the YNU Events Calendar website (<https://www.ynu.org.uk/news-events/events>)

Feb	8	Evening Zoom Meeting (7.30pm): Tiny Worlds by Tim Jonas
	24	YNU Executive Meeting. St. Chad's, Leeds. 10.30-13.30
Mar	7	Evening Zoom Meeting (7.30pm): Short presentations & Chat Session
	9	Joint YNU & CIEEM Conference: The 'Amateur' Naturalist and Professional Ecologist: Bridging the Gap. St. George's Conference Centre, 60 Great George St., Leeds LS1 3DL. 09.30-16.30.
	17	Lepidoptera Group Annual Meeting: Bramham Village Hall. 11.00 – 15.30. Contact co-ordinators Robert Woods or Charlie Fletcher
	24	Entomological Section Recorders' Reports. Spark, York 17-21 Piccadilly, York YO1 9PB. 10.30-15.30
May	11	Botanical Section VC63. Rossington. near Brodsworth Way Pavilion, DN11 0FD. SK62819790. Contact Louise Hill.
	11	Bryological Section VC64. Wharfedale. Meet 10:00am in the lay-by at Halton Gill, grid reference SD88067646. Contact Steven Heathcote.
	18	VC63 Excursion: Anston Stones Wood. Meet at car park. SK521842. 10.30. Contact Joyce Simmons
Jun	8	Entomological Section VC62. Yorkshire Arboretum, Castle Howard. 10.00 – 15.30. Meet Arboretum car park (SE706697). Contact Alastair Fitter
	22	VC64 Excursion: Lower Winskill Farm, Langcliffe, Settle. SD826664. 10.30. Contact Terry Whitaker.
	29	Botanical Section VC65. Len Pasture SSSI. Meet at 10.30 at entrance to site off the lane between Low Row (on B6270) and Crackpot. SD976969. Contact Linda Robinson.
Jul	6	VC65 Excursion: Preston-under Scar, Wensleydale; SE076914. 10.30. Contact Terry Whitaker.
	20	VC61 Excursion: Priory Meadows, Cottingham, Hull. 10.30. Contact Africa Gómez.
Aug	3	Botanical Section VC63: Doncaster Common. Meet 10.30 at Sandall Beat Wood Car Park at the end of the Straight Mile (Sandall Beat Road, off Leger Way) DN2 6JP. SE609037. Contact Louise Hill.
	10/ 11	VC62 Excursion: Castle Howard Estate. Meet Bog Hall SE725707. 10.30. A 2-day meeting, not a residential, so members can attend either or both days. Contact Sarah White.
Oct	5	Bryological Section VC63. Wessenden Head and Brook. Meet at 10:00 am in the lay-by at Wessenden Head SE07710760. Contact Steven Heathcote.
Nov	2	Entomological Section AGM. St. Chad's Meeting Rooms, Headingley 10:30 - 15:30.



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Please look at a recent issue of the journal for a general idea of how to present your article. Also see *The Naturalist* - *Guidance for authors* at www.ynu.org.uk/naturalist and please **avoid** the following:

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- using tabs to tabulate information (please use MS Word table format).

Good quality, high resolution images are very welcome and should be sent as .jpg files, with a separate MS Word file containing the caption and name of the person to whom the image should be attributed.

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